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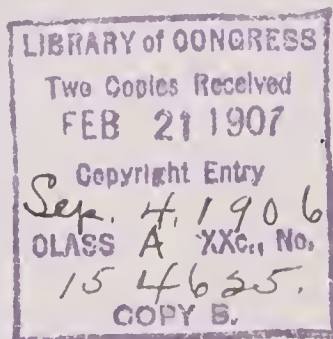
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Reference Index

A

A I.—A symbol used to class first-class vessels in Lloyd's Register of British and Foreign Shipping. Also frequently used to express general excellence.

Aachen, or Aix-la-Chapelle.—A town in Prussia, population (1900), 135,245.

Aalborg.—A town in Denmark, population (1901), 31,457.

Aalesund.—A town in Norway, population (1900), 11,777.

Aargau.—A canton in Switzerland; area, 542 square miles; population (1904), 210,354.

Aarhus.—A town in Denmark; population (1901), 51,814.

Aaron, Arabic legend of Moses and, 3, 257.

Ab, 13, 102.

Ab, Feast of, 13, 102.

Abaco.—One of the principal islands of the Bahamas; population (1904), 3,314.

Abbas I.—(1557-1628.) A famous Persian shah, known as the "Great."

Abbas Hilma.—Khedive of Egypt; born in 1874; succeeded to the throne January 8, 1892.

Abbe, Cleveland.—(1838-) American astronomer; meteorologist in the Bureau of Weather; introduced standard time; wrote many scientific treatises.

Abbey, Edwin A.—(1852-) American painter and designer. One of his important works, "The Search for the Holy Grail," decorates a room in the Boston Public Library.

Abbot, C. C.—American naturalist; author of "A Naturalist's Rambles," "In Nature's Realm."

Abbot, Ezra.—(1819-84.) An American biblical scholar; was professor of New Testament criticism and interpretation at Harvard University (1872-84), one of the editors of the American edition of Smith's "Bible Dictionary" and a member of the American Committee for New

Testament Revision; published "Literature of the Doctrine of a Future Life" (1864), "The Authorship of the Fourth Gospel" (1890), etc.

Abbot, Francis Ellingwood.—Born at Boston, Mass., 1836. An American philosophical writer, editor of "The Index," a journal of free thought (1870-80), and author of "Scientific Theism" (1886), "The Way Out of Agnosticism" (1890), etc.

Abbot, Samuel, 11, 213.

Abbotsford.—The home of Sir Walter Scott, near Melrose, on the Tweed.

Abbott, Austin.—(1831-96.) An American lawyer and legal writer, son of Jacob Abbott; was appointed dean of the faculty of law of the University of the City of New York in 1891, and was the author of "New Cases, Mainly New York Decisions (1877-86)," "Legal Remembrancer" (1887), a series of digests of New York statutes and reports of United States courts, etc.

Abbott, Benjamin Vaughan.—(1830-90.) An American lawyer and legal writer; eldest son of Jacob Abbott. He was the author of "A Treatise on the Courts of the United States and their Practice" (1877). "A Dictionary of Terms in American and English Jurisprudence" (1870), etc.

Abbott, Charles Conrad.—(1843-) An American naturalist born at Trenton, N. J. Graduated M. D. from the University of Pennsylvania in 1865. His numerous literary works are along the lines of science and archæology. They include "Rambles about Home," "Upland and Meadow," "Days out of Doors," "Travels in a Tree-top," "Birds about Us," and "A Colonial Wooing."

Abbott, Jacob.—(1803-1879.) American clergyman, author and educator, born in Hallowell,

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- Maine. He was a most prolific writer, the number of his publications exceed two hundred.
- Abbott, John Stevens Cabot.**—(1805-1877.) An American Congregational clergyman and historical writer. He was the author of a "History of Napoleon Bonaparte," "History of Frederick II.," "The Mother at Home," "The Child at Home."
- Abbott, Lyman.**—Born at Roxbury, Mass., Dec. 18, 1835. A Congregational clergyman, author and journalist. He has been the editor-in-chief of the "Christian Union," which was changed to the "Outlook" in 1881, and was pastor of Plymouth Church, Brooklyn, from 1888 to 1899, succeeding Henry Ward Beecher. He originally studied law, but abandoned that profession for the ministry in 1860.
- Abbreviations** used in business, List of, 13, 2.
- Abd-el-kader.**—(1807-1883.) An Algerian general. Captured by the French in 1847. Released by Napoleon III. in 1852.
- Abd-el-kader**, 11, 22.
Surrender of, 11, 22.
- Abd-er-Rahman**, 10, 238.
- Abdomen, The**, 1, 277.
Exercises for the, 6, 24.
- Abdul-Hamid II.**—Sultan of Turkey; born 1842; ascended the throne, 1876.
- Abdullah**, Mohammed's father, 3, 386.
- Abecedarians.**—A German Anabaptist sect of the sixteenth century, led by Nicholas Stork, a weaver of Zwickau, which rejected all learning (even the learning of "A-B-C") as a hindrance to religion; professed a special inspiration; and predicted the overthrow of existing governments.
- A Becket, Gilbert Abbott.**—(1810-1856.) A British humorist born in London. He was one of the founders of "Punch" (1841). He wrote "The Comic History of England," "The Comic History of Rome," and "The Comic Blackstone."
- A Becket, Thomas.**—(1118-70.) Archbishop of Canterbury and Chancellor of England. Murdered in the Cathedral in Canterbury, as a consequence of his opposition to the opinions of King Henry II. He was canonized by the Pope, and many pilgrims visit his shrine.
- Abednego**, 10, 184.
- Abel, Story of**, in Arabic legend, 3, 226.
- Abélard, Peter.**—(1079-1142.) A Breton scholar and teacher, celebrated for his romantic love for Héloïse.
- Abencerrages.**—A powerful Moorish tribe of Granada. Exterminated by Boabdil, the last King, who was dethroned by Ferdinand and Isabella, in 1492.
- Abercrombie, John.**—(1780-1844.) A Scottish physician and author. He was the recognized head of the medical profession in Scotland. In 1845 he was elected Lord Rector of Aberdeen. He wrote several medical works and "Inquiries Concerning the Intellectual Powers of Man," and "The Philosophy of the Moral Feelings," both of which were very popular. As a philosopher he was opposed to materialism.
- Abercrombie, Dr. John.**—Weight of brain of, 1, 283.
- Abercromby, Sir Ralph.**—(1734-1801.) A distinguished British general and commander-in-chief in the West Indies, 1795-97, where he took Grenada, Demerara and Trinidad, and relieved St. Vincent. He was mortally wounded at the battle of Alexandria, between the English and the French.
- Aberdeen.**—Chief seaport of the north of Scotland, near the mouth of the Dee. Pop. 143,722.
- Aberdeen Cattle**, 4, 16.
- Abib, or Nisan.**—The first month of the Jewish year, corresponding to the month of April.
- Abingdon.**—City in Knox County, Ill. Pop. (1900), 2,022.
- Ableman versus Booth**, 11, 334.
- Abnaki.**—A confederacy of North American Indians, formerly occupying Maine and the valley of the St. John River, and ranging northwest to the St. Lawrence. After the fall of the French in North America, many of the Abnaki retired to Canada. They number now about 1,600.
- Abner.**—Cousin of Saul, first king of Israel. Slain by Joab.
- Abo.**—A seaport of Finland. The capital of Finland until 1819. Pop. (1898), 35,820.
- Abolitionists**, 11, 335; 12, 3.
- Abominations, Tariff of**, 11, 335.
- Aborigines.**—The earliest inhabitants of a country. In America the term is generally applied to the Indians.
- Aboukir** (*a-boo' keer*).—A bay and city in the north of Egypt. Nelson defeated the French fleet in the bay, in what is known as the battle of the Nile, in 1798. In 1799, Bonaparte with 5,000 men defeated a Turkish army of 15,000. In 1801 Gen. Sir Ralph Abercromby, in charge of a British expedition against the French, captured the town.
- About, Edmond François Valentin.**—(1828-1885.) A French writer, novelist, and humorist. He was elected to the Legion of Honor in 1858. He was a war correspondent during the Franco-Prussian War in 1871. His stories include "The King of the Mountains," "The Man with a Broken Ear," and "The Notary's Nose."

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Above Par.—Above equal, nominal, or face value.

A. B. Plot, 11, 335.

Abraham, Arabic legend of, 3, 237.

Abraham, Plains or Heights of.—A high plateau near Quebec, Canada, the scene of the battle of Quebec, Sept. 13, 1759, between the English under Gen. Wolfe, and the French under Gen. Montcalm. Both commanders were mortally wounded in the action. By this battle Canada was lost to the French.

Absinthe, or Wormwood.—The leaves and tops of *Artemisia absinthium*, a plant of the order Compositæ. An aromatic, bitter tonic, and anthelmintic. It is the basis of a French liqueur called absinthe. The continued use of this liqueur produces epileptiform diseases, which are incurable.

Absolute, Sir Anthony.—A character in Sheridan's comedy "The Rivals."

Abstract.—A summary of the substance or important parts of a treatise or writing.

Abt, Franz.—A German composer, noted chiefly for his songs. Born at Eilenburg, Prussian Saxony, 1819; died at Wiesbaden, 1885.

Abubeker, 10, 237.

Abu Thaleb, brother of Mohammed, 3, 387.

Abydos.—An ancient city of Upper Egypt. Important on account of the discovery there of valuable tablets and other remains of antiquity.

Abyssinia is in Eastern Africa. It is mountainous and elevated. The hills enclose fertile valleys, which produce rich crops of coffee, cotton, sugar-cane, grapes, fruits, and timber. Iron ore and salt are the mineral products. Chief exports are ivory and gums. Capital, Adis Abbeba. By the treaty of Uchali, May 2, 1889, as interpreted by the Italians, Abyssinia became an Italian "protectorate." King Menelik denounced this treaty in 1893, and by the convention of October 26, 1896, Abyssinia's independence is fully recognized. There are numerous small towns in the country, but few with a resident population of over 5,000. Area about 150,000 sq. miles. Estimated population 3,500,000.

Acacia, Rose, 4, 435.

Academy of Arts and Sciences, American.—A society for the encouragement of art and science, founded in Boston in 1780.

Academy, French.—A society having for its object the literary interests of France; the outgrowth of an association which originated early in the seventeenth century, and which was formally established by Cardinal Richelieu in 1635. The Academy includes forty mem-

bers, who are generally known as the "forty immortals."

Acadia.—The former name of the Canadian Province of Nova Scotia, on the Bay of Fundy. It was colonized by the French in 1604, and ceded (with the exception of Cape Breton) to England in 1713. Forty-two years later, the French settlers in the colony were defeated by Britain. Do not confuse this word with Arcadia, which was a Greek grazing or pasture country, lauded by poets—the home of rustic simplicity and plenty, of piping shepherds and coy shepherdesses.

Acadians, Expulsion of the, 11, 57.

Acajutla.—A seaport town in San Salvador.

Acapulco (*ä-kä-pöl'kō*).—A Mexican seaport. It possesses a very fine harbor. Pop., about 5,000.

Acarnania.—A country in Ancient Greece, south of Epirus, separated by the Ambracian Gulf, west of Ætolia. It forms with Ætolia one of the nomes or divisions of modern Greece.

Acaulescent plants, 4, 395.

Accadians, 10, 48.

Acceleration of falling bodies, 5, 257.

Accent, in reading or speaking. The chief accents used are:

The acute accent (á) marks a rising inflection of the voice.

The grave (à) marks a falling inflection.

The circumflex (â) is a combination of both.

The macron (ā) marks a long vowel.

The breve (ă) marks a short vowel.

The diæreses (ä) when placed over the latter of two vowels indicates that the sound of both vowels must be separate, and that the combination is not a diphthong.

Accept, 13, 1.

Acceptance, 13, 1.

Accessory, 13, 1.

Accidents, Emergency box for, 1, 369.

Accidents, First aid in, 1, 352.

Accipters.—A class of birds distinguished by a hooked bill, strong, short feet, and sharp, hooked claws. It includes the Vulture, Falcon, Owl, and Shrikes.

Accommodation, 13, 1.

Accommodation Paper, Endorsing, 7, 449.

Account, 13, 1.

Account, Balance, 13, 21.

Account Books for Children, 2, 472.

Account, Current, 13, 7.

Account, Dead, 13, 116.

Account Sales, 13, 7.

Accountancy, Certified Public, 13, 4.

Accountancy, Scientific, 13, 4.

Accountant and Bookkeeper, 13, 1.

Accountant, Chartered, 13, 1.

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- Accountant, The**, by Charles Waldo Haskins, 13, 4.
- Accountants' Arithmetic**, 13, 9.
- Accountants**, Commercial law for, 13, 5.
- Accountants in the Civil Service**, 13, 360.
- Accounting**, 13, 7.
- Accounts**, Importance of keeping household, 1, 100.
- Accounts**, Keeping personal, 7, 442.
- Accra**.—Chief town of the Gold Coast in West Africa, an English protectorate. Population (1901), 14,842.
- Accrue**, 13, 1.
- Accrued Interest**, 13, 1.
- Acer**, or Maple Family, 4, 405.
- Acer negaundo**, 4, 408.
- Acer Pennsylvanicum**, 4, 406.
- Acer pseudo-platanus**, 4, 409.
- Acer rubrum**, 4, 407.
- Acer saccharinum**, 4, 405.
- Acetabulum**, 1, 274.
- Acetates**, 5, 231.
- Acetic acid**, 5, 231.
- Acetic aldehyde**, 5, 230.
- Acetylene gas**, 5, 182.
- Acetylene**, Making, 5, 229.
- Achæan League**, 10, 207, 217.
- Achaia**, 10, 208.
- Achaia** (*A-ka'yä*).—North of the Peloponnesus, in Greece, supposed to have been settled about 1330 B. C. It was conquered by the Turks in 1540.
- Achelous**.—The largest river in Greece, 130 miles long.
- Acheron**, 10, 102.
- Achikulak**.—A Russian town in the Caucasus. Population (1897), 24,000.
- Achillæa**, or **Millfoil**.—A plant belonging to the Compositæ. It is sometimes called the Yarrow.
- Achilles**, Prince of Pthia, 3, 368.
- Achilles' Tendon** (**Tendo Achilles**).—The ligament which attaches the coelus and gastrocnemius muscles of the calf of the leg to the heel-bone.
- Acid**, Acetic, 5, 231.
Benzoic, 5, 244.
Boric, 5, 198.
Butyric, 5, 231.
Carbolic, 5, 243.
Chlorplatinic, 5, 223.
Citric, 5, 232.
Formic, 5, 231.
Gallic, 5, 244.
Hydriodic, 5, 189.
Hydrochloric, 5, 188.
Hydrocyanic, 5, 182.
Hydrofluoric, 5, 189.
Iodic, 5, 189.
- Acid**, Lactic, 5, 231.
Malic, 5, 231.
Metaphosphoric, 5, 197.
Nitric, 5, 174.
Orthophosphoric, 5, 197.
Oxalic, 5, 231.
Palmitic, 5, 231.
Phosphoric, 5, 197.
Prussic, 5, 182.
Pyroligneous, 5, 231.
Stearic, 5, 231.
Sulphuric, 5, 191.
Sulphurous, 5, 191.
Tannic, 5, 244.
Tartaric, 5, 232.
- Acids**, Basicity of, 5, 191.
Defined, 5, 172.
Formed by sulphur, 5, 190.
Formed from chlorine, 5, 189.
Names of, 5, 173.
Organic, 5, 231.
- Acis and Galatea**.—Opera by Händel; composed about 1720.
- Acklin's Island**.—One of the Bahamas.
- Acknowledge**.—To assent to an act in a legal sense.
- Aconcagua**.—One of the loftiest peaks of the Andes, 23,000 ft. high.
- Acotyledonous plants** include the Cryptogams, such as ferns, mosses, lichens, liverworts, fungi, and algæ.
- Acoustics**.—That branch of physical science which explains the phenomena and laws of sound. (See **SOUND**.)
- Acquisition of territory**, 12, 390.
- Acre**.—A seaport in Syria, in the Levant at the head of the Mediterranean Sea. It played an important part in the Crusades and its siege by Richard Cœur de Lion in 1191 is one of the most remarkable events in the Wars of the Cross. It was again besieged in 1799 by Bonaparte's army, which was compelled to raise the siege in 60 days and to retreat.
- Acre**, Siege of, 10, 258.
- Acre**, Size of an, 13, 155.
- Acrisius**, King of Argos, 10, 110.
- Acrogenous plants**, or **Acrogens** (growing at the summit) are those in which the stem grows by a simultaneous development throughout the stem, increasing by elongation at the summit. The class comprises many varieties of palms.
- Acropolis**.—The high-city, was a name given by the Greeks to the citadel, which usually occupied the highest point within the city. The most noted was the Acropolis at Athens which contained the Parthenon and other famous buildings.

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Acrostic.—The name of a number of poetical lines so arranged that the initial letters of the lines form a word or a name. The final letters spell words sometimes also; and sometimes the middle letters of the lines are so arranged. One of the most remarkable acrostics is the formation of the Greek word *ichthys* meaning "a fish," from the initial letters of the Greek word "Jesus Christ, the son of God, the Savior." This is the explanation of the quite common use of the fish as a weathervane on churches.

Actæon, 10, 93.

Act of Settlement, 10, 338.

Action.—A suit or legal process before a court to redress a wrong or enforce a right.

Actium.—A promontory and village at the entrance of the Ambracian Gulf in Acarnania in ancient Greece. Octavius, who succeeded Julius Cæsar as Emperor of Rome, here defeated Mark Antony, his rival, Sept. 2, 31 B.C. After the battle, Antony fled with Cleopatra to Egypt, and his army and fleet surrendered after waiting in vain seven days for his return.

Actium, Battle of, 10, 227, 395.

Activity of Children, 2, 416.

Actresses, Advice to Would-be, by Annie Russell, 7, 355.

Actuary, 13, 7.

Acute angle, 7, 250.

Ada Maya, mother of all, 10, 32.

Adagio.—Slow movement or measure of time in music.

Adair, James, 11, 52.

Adam, Arabic legend of, 3, 215.

Creation of, according to the Koran, 3, 392.

In Arabic legend, 3, 215.

Adams, Charles Baker.—(1814-1853.) An American naturalist and geologist.

Adams, Charles Francis, 12, 184.

Adams, Charles Kendall.—Born at Derby, Vt., 1835. An American educator and historical writer.

Adams, Fort.—One of three principal forts in the United States. It mounts 500 guns; situated at the entrance to the harbor of Newport, R. I.

Adams, Hannah.—(1755-1832.) The first woman in America to devote her life to literature. Among her works were "A View of Religious Opinions," "A Summary History of New England," "The History of the Jews" since the destruction of Jerusalem, reprinted in London in 1818. She was born in Dedham, Mass., and died near Boston.

Adams, Henry.—(1838-) The third son of Charles Francis Adams, born near Boston,

Mass. Graduated from Harvard (1858); was private secretary to his father, Minister to England (1861-1868); assistant professor of history at Harvard (1870-1877). After a visit to England, he settled in Washington, D. C. He wrote "Essays in Anglo-Saxon Law," "Life of Albert Gallatin," "Writings of Albert Gallatin," "John Randolph," "History of the United States," "Historical Essays," and "The Tendency of History." He was for a time editor of the *North American Review*.

Adams, John, 11, 185, 435.

Presidency of, 11, 191.

Adams, John Quincy, 11, 271.

Adams, Mount.—1. The second highest summit of the White Mountains (5,819 ft.). 2. A peak of the Cascade Mountains (9,570 ft.).

Adams, Point.—A headland of Ore., at the mouth of the Columbia River.

Adams, Samuel, 11, 66.

Adams, Sarah Fuller (Flower).—(1805-1848.)

An English poetess and hymn-writer. She was married in 1834 to William Bridges Adams, inventor of "fish-joint" and other railway improvements. Her works include the well-known hymn "Nearer, my God, to Thee" (1841), often erroneously credited to Harriet Beecher Stowe; "He sendeth sun, He sendeth shower"; and many other hymns composed for use in Finsbury Chapel, and set to music by her sister, Eliza Flower. Her longer works include "Vivia Perpetua," "The Royal Progress," and "The Flock at the Fountain."

Adams, William Henry Davenport.—(1828-1891.) An English journalist, compiler and author. He wrote numerous works of an historical and descriptive nature. He edited *The Scottish Guardian* from 1870 to 1877.

Adams, William, 10, 167.

Adana.—A city in Turkey. Population (1900), 45,000.

Adar, 13, 102.

Adder's-Tongue, Yellow, 5, 42.

Addison, Joseph.—(1672-1719.) An English poet and essayist. Wrote "The Campaign," a poem celebrating the victory of the Duke of Marlborough at Blenheim; the tragedy "Cato;" essays to the *Spectator*, the *Tattler*, and the *Guardian*, upon which his fame rests.

Addition, 13, 9.

Address, Proper mode of, 1, 44.

Proper forms of, 13, 7.

Address, Proper forms of, in letter-writing, 1, 90.

Adducent nerve, 1, 284.

Adductor brevis muscle, 1, 276.
longus muscle, 1, 276.

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Adductor medius muscle, 1, 276.

muscle, 1, 274.

pollicis manus muscle, 1, 275.

Ade, George.—(1866-) An American journalist and author; born in Illinois; educated at Purdue; began his journalistic career in Chicago; wrote "Stories of the Street and Town;" introduced "Artie;" wrote "Pink Marsh;" "Fables in Slang." Wrote the librettos for "The Sultan of Sulu," "Peggy from Paris," and the rural comedy "The County Chairman."

Adelaide.—Capital of S. Australia; pop. 140,000.

Aden.—A fortified British seaport and coaling and watering station in Arabia, near the Straits of Bab-el-Mandeb, the southern entrance to the Red Sea. A valuable and important station on the way from India to Europe.

Adenoid growths a cause of deafness, 2, 99.

Adhesion, Force of, 5, 253.

Adirondacks.—A range of mountains in the north of New York State, between Lakes Champlain and Ontario. Mount Marcy, 5,344 ft., is the highest peak.

Adjustment, 13, 8.

Adjutant bird, 4, 227.

Adler, Felix D.—A well-known lecturer and author, b. 1851. In 1876 he founded in New York City the Society of Ethical Culture.

Admete, 10, 107.

Admetus, King of Thessaly, 10, 91.

Administrator, 13, 8.

Admiral, 12, 184.

Admiralty Inlet.—An arm of the sea, on the western coast of the state of Wash., connecting Puget Sound with the Strait of Juan de Fuca.

Admiralty Island.—An island west of Alaska, belonging to the United States.

Admiralty Island.—An island in the Bismarck Archipelago in the western Pacific, belonging to Germany.

Admission of States.—By the adoption of the Declaration of Independence, July 4, 1776, the original thirteen Colonies which formed the Union were created "free and independent states." Several of the Colonies had already changed their original charters and established independent local governments. A resolution was passed Oct. 10, 1780, by the Continental Congress, which provided that western territory to be ceded to the U. S. "shall be settled and formed into distinct republican states, which shall become members of the Federal Union." The following steps are necessary for the admission of a territory to statehood: (1) A petition to Congress expressing the desire of the people for admission; (2) an enabling

act passed by Congress, stating the conditions of admission; (3) the adoption of a constitution and form of state government by a convention of delegates chosen by the people; (4) the ratification of the constitution and the election of state officers by the people; (5) a proclamation by the President that the territory has become a state. The admission of a State to the Union dates from the day on which the act takes effect.

Adolescence, Education during, 2, 453.

Period of, 2, 453.

Adonis, 10, 94.

Adrianople (the city of Hadrian).—A city in European Turkey, named for its restorer, Emperor Hadrian, who died 138. Population 81,000.

Adrianople, Treaty of, 10, 363.

Adriatic Sea.—That part of the Mediterranean Sea which lies between Italy on the west and Austria and Turkey on the east. It is 500 m. long from the Gulf of Otranto on the south to the Gulf of Trieste on the north; its average width is 130 m. The most interesting part of it is that region around Venice. Its depth varies very greatly. In some places it is not more than 12 fathoms deep. Its waters are much more salt than the Atlantic and the rise of tide is very slight.

Adua.—Capital of Tigré, in Abyssinia. Population 3,000.

Ad valorem, 13, 8.

Duties, 13, 249.

"Advance agent of Prosperity," 12, 185.

Advance, The.—The vessel in which Elisha Kane explored the Arctic regions in search of Sir John Franklin.

Advances, 13, 8.

Advent, 13, 91.

Adventure, The.—(1) The ship of the pirate Captain Kidd. (2) The ship in which Captain King explored the coast of South America (1826-30).

Advertisement.—The first regular newspaper, "The Certain Newes of this Present Week," published in England in 1622, did not contain advertisements. They first appeared in 1652 in very crude form in the "Mercurius Politicus." The first printing press was brought to America in 1639. In 1704 the first regular newspaper "The Boston News Letter" was published.

Advertisement writing an occupation for women, 7, 383.

Advertising, Bank, 13, 31.

department of a newspaper, 8, 472.

Newspaper, 13, 387.

Value of, 13, 380.

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Advertising, Women and, 7, 386.

Advice, 13, 8.

Letter of, 13, 145.

Ædes, The, 4, 357.

Ædiles, 10, 210.

Ægean Sea.—Between Greece and Asia Minor and south of Turkey. It is sometimes called the Grecian Archipelago, as it is studded with islands belonging to Greece.

Ægeus, King of Athens, 10, 109.

Ægospotami, Battle of, 10, 200.

Ælia Capitolina, 10, 228.

Æneas, Trojan hero, 3, 373.

Æneid.—The great Latin epic poem which records the wanderings of Æneas from the time of the burning and sack of Troy. It was written about 24 B. C. by Publius Vergilius Maro, who died in 19 B. C. at the age of 51.

Æolia.—In Asia Minor, comprised territory on the mainland and several islands. Mytelene, on Lesbos, was regarded as the Capital.

Æolus, god of the winds, 3, 379; 10, 105.

Æon, a Phœnician god, 10, 80.

Ærial Navigation, 5, 399.

Æschines.—(389–314 B. C.) An Athenian orator and the rival of Demosthenes. He was one of the ten Athenian ambassadors who went to negotiate a peace with Philip of Macedon in 347 B. C. He favored the alliance with Philip which Demosthenes opposed. After the battle of Chæronea, 338 B. C., Ctesiphon proposed that a golden crown be given in honor to Demosthenes. Æschines brought a charge against Ctesiphon of having introduced an illegal measure. The trial was postponed for six years. Then it evoked the great oration of Demosthenes, "On the Crown." Ctesiphon and Demosthenes were acquitted; Æschines was convicted of having introduced a factious resolution. He was unable to pay the fine imposed and went into exile in the island of Samos where he taught oratory. His orations which have come down to us are: "On the Embassy," "Against Timarchus," and "Against Ctesiphon."

Æschylus.—(525–455 B. C.) The earliest of the three great Greek tragic poets and the father of Greek tragic drama. His extant dramas are seven: "Seven Against Thebes," the "Suppliants," the "Persians," "Prometheus Bound," "Agamemnon," the "Libation-Bearers," and the "Eumenides."

Æsculapius, 10, 91.

Æsculus glabra, 4, 452.

hippocastanum, 4, 451.

octandra, 4, 452.

hybrida, 4, 452.

pavia, 4, 452.

Æsculus rubicunda, 4, 452.

Æson, king, 10, 108.

Æsop, fable writer, 3, 165.

Æthelred (*ath'el-rād*), or **Ethelred**, II., "The Unready"—(968–1016.) King of England.

Ætius, "last of the Romans," 10, 403.

Ætolia.—A district in northwestern Greece. After the downfall of Athens and Sparta, the Ætolians became the rivals of the Achæans, and were alternately enemies and allies of the Romans.

Affection, Maternal, 2, 389.

Affidavit, 13, 8.

Afghanistan is in the southwestern part of Asia, and on the northwestern border of British India. The north and east are very high, and on the southwest is the elevated plateau of Iran and sandy plains. Climate is healthful. All the products of the temperate zone abound, also asafetida and madder. Fruits are largely exported. Carpets form the chief article of manufacture. Area 279,000 sq. miles, population 4,500,000 to 5,000,000. Capital, Cabool (Kábul). The government is monarchical; each province is under a *hàkim* or governor.

Afghanistan.—British invasion of, 11, 15.

Africa.—The second in size of the three grand divisions of the Eastern Hemisphere, extending from latitude 37° 20' north to 34° 50' south, and from longitude 17° 31' west to 51° 22' east. Its boundaries are the Mediterranean Sea on the north; the Isthmus of Suez, the Red Sea, and the Indian Ocean on the east; the Southern Ocean on the south, and the Atlantic Ocean on the west. The countries bordering the Mediterranean have long been inhabited by nomadic tribes of Moors and Arabs. Egypt contains remains of the most ancient civilization. The Great Desert of Sahara stretches 2,000 miles from east to west and 1,000 miles from north to south, between the cultivated tract bordering on the Mediterranean and the Soudan. Over a great part of this region rain never falls, and in other parts but rarely. The inhabitants of Africa are chiefly of the Negro race, with Kaffirs, Hottentots, Copts, Arabs, Moors, Berbers, and some Europeans. The prevailing religions are Mohammedanism and various forms of paganism, but the missionaries of the Roman Catholic and of the various Protestant churches have in recent years made many converts. Of all that has been written by explorers concerning the interior of the "Dark Continent," its people, vegetation, and animals, the works of David Livingstone and Henry M. Stanley probably convey the best and fullest general information. Most of Af-

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rica has been subjugated by European nations and divided among themselves, France and England claiming the largest portions. The area of the continent is about 11,508,793 sq. miles, with an estimated population of 165,000,000. The western coast was for many years ravaged by European slave traders, who captured the natives and sold them in foreign lands.

Africa, France in, **11**, 21.

German East, **11**, 21.

German Empire in, **11**, 21.

German West, **11**, 20.

Italy's power in, **11**, 21.

Partition of, **11**, 20.

African Slave Trade, **11**, 336.

Agamemnon, King of Argos, **3**, 367.

Agassiz, Alexander.—Born at Neuchâtel, Switzerland, Dec. 17, 1835. An American zoölogist and geologist. He was director and curator of the Museum of Comparative Zoölogy of Harvard University, Cambridge, Mass. 1874-98.

Agassiz, Jean Louis Rodolphe.—Born at Motier, Switzerland, 1807; died at Cambridge, Mass., 1873. A justly celebrated Swiss-American naturalist, noted especially as a geologist and ichthyologist. He became professor of zoölogy and geology at Cambridge in 1848; and in 1859, curator of the Museum of Comparative Zoölogy. He wrote "Recherches sur les poisson fossiles" (1833-43), "Natural History of the Freshwater Fishes of Europe" (1839-40), "Etudes sur les Glaciers" (1840), "Système Glaciaire" (1847), "Contributions to the Natural History of the United States" (1857).

Agassiz as a teacher, **8**, 159.

Agassiz's brain, Weight of, **1**, 283.

Agate.—A stone of the quartz family. The chief varieties are: 1, Calcedony, 2, Carnelian, 3, Moss agates, 4, Bloodstones, 5, Chrysoprase.

Agate, June birthstone, **1**, 197.

Agave, **5**, 49.

Age, Heroic, **10**, 189.

of Brahma, **10**, 7.

of Pericles, **10**, 199.

Age, To tell any one's.—Tell a person to put down the number of the month in which he was born, to multiply it by two; then to add five; then to multiply it by 50; then to add his age; then to subtract 365; then to add 115; then to tell you the amount he has left. The two figures on the right will denote the age and the remainder the number of the month in which he was born.

Age of Animals.—According to an old Celtic rhyme, and thus put into modern English:—

"Thrice the age of a dog is that of a horse;
Thrice the age of a horse is that of a man;
Thrice the age of a man is that of a deer;
Thrice the age of a deer is that of an eagle."

Aged lion, an Armenian fable, **3**, 177.

Agent, **13**, 8.

Ages (3 in number).—The age of stone, when implements of stone were employed; the age of bronze, when those of copper or bronze were used; and the age of iron, when implements of iron came in use as now.

Agésilas.—King of Sparta, 399-360 B. C.

Agésilas, the Spartan, **8**, 16.

Agincourt.—A village in the department of Pas de Calais in France. On Oct. 25, 1415, Henry V. of England, with 15,000 men defeated the French army of over 50,000 men. The English archers won the battle which lasted three or four hours.

Agincourt, Battle of, **10**, 266.

Agio, **13**, 8.

Agnes, The Eve of Saint.—A poem by Keats; written 1818.

Agnew, Cornelius Rea, M.D., LL.D..—(1830-1888.) Celebrated surgeon and oculist of New York.

Agnew, D. Hayes, M.D..—(1818-1892.) One of the greatest surgeons of America.

Agni, god of fire, **10**, 31.

Agora.—The public market of the Greeks, corresponding to the Roman forum.

Agra (*ä'grä*).—In British India, a division of the northwestern province; also a district of the division of Agra. Military center and engaged in commercial interests.

Agrarian law provided for an equal distribution among the Roman people of all land acquired by conquest. It was proposed by Spurius Cassius the consul, in 486 B. C. He lost his life on account of it in 485 B. C. Others who suffered through it or its influences were Tiberius and Caius Gracchus in 133 and 121 respectively, and Livius Drusus, in 91.

Agreements, Oral, **13**, 122.

should be put in writing and dated, **13**, 122.

Verbal, **13**, 122.

Written, **13**, 122.

written in pencil, **13**, 123.

Agreus, **10**, 81.

Agricola, **10**, 227.

Agriculture, Department of, **12**, 399.

Agrigentum, Siege of, **10**, 214.

Agrippina, sister of Caligula, **10**, 397.

wife of Germanicus, **10**, 397.

Agropyrum divergens, **5**, 82.

spicatum, **5**, 81.

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Aguilera, Ventura Ruiz.—(1820-1881.) A Spanish lyric poet, called the Spanish Beranger.

Aguinaldo, Emilio, 12, 185.

Agulhas, Cape.—The most southerly point in Africa.

Ahab, King of Israel, 10, 82.

Ahaziah, 10, 83.

Aida.—An opera by Verdi; first performed in 1871.

Ailes, Milton E., 8, 221.

Ainsworth, William Harrison.—(1805-1882.) An English novelist. In 1842 he started *Ainsworth's Magazine*. His novels attained a great, though not wholly enviable popularity among the less cultivated class of readers.

Air, 5, 152.

Chemical composition of, 5, 153.

Compressed, 5, 262.

Elasticity of, 5, 152.

Impurities in the, 5, 153.

Solid particles in the, 5, 156.

supply of coal mines, 5, 458.

Weight of, 5, 152.

Air-brush for crayon work, 7, 408.

Aird, Thomas.—(1802-1876.) A Scotch poet and naturalist. Graduated from the University of Edinburgh. Most of his poems appeared first in *Blackwood's Magazine*.

Aix-la-Chapelle (*ās-lä-shä-pel'*).—A city of Prussia; the birthplace of Charlemagne; 55 emperors have been crowned here. The French took the city in 1792, the Austrians took it again in 1793; the French regained it in 1794; and it was finally ceded to Germany in 1814.

Aix-la-Chapelle, Congress of, 10, 367.

Ajaccio.—Capital of the island of Corsica, on the w. coast. It was the birthplace of Napoleon Bonaparte. The house in which he was born is still in good preservation. Pop. 17,000.

Akbar, 10, 177.

Akenside, Mark.—(1721-1770.) An English poet; graduated in medicine from Leyden. His chief poem is "The Pleasures of the Imagination," published in 1744. His later poetry did not add to his reputation. His numerous medical treatises were much valued.

Akers, Benjamin Paul.—(1825-1861.) An American sculptor. His best works are "Una and the Lion" and "The Dead Pearl-diver."

Akkad.—In Babylonia. One of the four cities of Nimrod's Empire.

Akron.—City and capital of Summit Co., O., 36 m. s. of Cleveland. Pop. 43,000.

Aksakoff, Ivan Sergyevitch.—(1823-1886.) A Russian writer and journalist. He was the leader of the Panslavist movement and the best known writer in the cause.

Alabama.—One of the southern Gulf states of the U. S. of America. Bounded on the north by Tenn., east by Ga. and Fla., south by Fla. and the Gulf of Mexico, west by Miss. The northern part is mountainous and rich in coal and iron; the southern part is low and level and chiefly devoted to the raising of cotton. First settled by the French in 1702; the territory was acquired part by Great Britain and part by Spain, and was ceded to the U. S. by the former in 1783 and by the latter in 1819; admitted to the Union in 1819; seceded Jan. 11, 1861, and during the Civil War was one of the states of the Southern Confederacy; readmitted to the Union in July, 1868. Capital, Montgomery; chief cities, Mobile, a gulf port, and Birmingham, in the heart of the iron producing district; other important towns are Anniston, Eufaula, Florence, Huntsville, New Decatur and Selma; has 66 counties; area, 52,250 sq. miles; pop. (1900), 1,828,697.

"Alabama," *The*, 11, 435.

Alabama Claims.—These grew out of depredations committed on the U. S. merchant vessels during the Civil War by the Confederate cruisers "Alabama," "Florida," "Georgia," and "Shenandoah," which had been equipped in British ports. By the treaty of Washington, concluded in 1871, between Great Britain and the U. S., provision was made for the submission of the claims to a court of arbitration, since known as the Geneva Tribunal, from the Swiss city in which it met. The court convened for the first time Dec. 15, 1871, and was composed of Charles Francis Adams, appointed by the President of the U. S.; Sir Alexander Cockburn, by the Queen of England; Count Federigo Sclopis, by the King of Italy; M. Jacques Staempfli, by the President of Switzerland, and Viscount d'Itajuba, by the Emperor of Brazil. The contention of the U. S. that it should be compensated for the cost of pursuing privateers, for increased rates of insurance incidental to the extraordinary dangers to shipping, and for the prolongation of the war as a consequence of the depredations, was denied. The court, in a judgment rendered Sept. 14, 1872, unanimously declared Great Britain to have been responsible for the direct damages inflicted by the "Alabama"; Sir Alexander Cockburn alone dissented in a similar finding in the case of the "Florida," and three members of the court decided in favor of the U. S. in the matter of the "Shenandoah." The Tribunal awarded to the U. S. \$15,500,000 in satisfaction of all claims, Sir Alexander Cockburn opposing the decision in a long opinion. The award was promptly paid.

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in gold by the British Government. The claims of those who had suffered by the ravages of the cruisers were adjudicated by a special court created for that purpose and they were paid out of the money received from England.

Aladdin and the Wonderful Lamp, 3, 25.

Alameda (*ä-lä-me'dä*).—1. A town in Spain, near Malaga. 2. A city in Alameda County, Cal. Pop. (1900), 16,464.

Alamo (*ä'lä-mō*).—A mission building in San Antonio, Texas, founded in 1744. The scene of a siege and assault (1836) during which the entire garrison of 150 men and the commander, Col. W. B. Traven, were destroyed.

Alarcon or **Alarcos**.—A small town and port of Central Spain.

Alaric.—(376-410.) King of the Visigoths. The great event in his life was his attack on the city of Rome in 410, which was plundered by the Goths for three days. Alaric retired to make the conquest of Sicily, but died soon after at Cosenza. It is said that his body was secretly buried with all his treasure in the bed of the stream of the Busento.

Alaric, 10, 402.

Invades Italy, 10, 232.

Alaska.—A territory of the United States, having an Arctic climate, situated in the extreme northwestern part of the continent. The region, formerly known as Russian America, discovered by Russians in 1741 and partially settled by them in 1801, was acquired by treaty from Russia in 1867 at a cost of \$7,200,000. It is bounded on the north by the Arctic Ocean; on the east by British Columbia and the Northwest or Yukon territories of the Canadian Dominion; on the south by the Gulf of Alaska and North Pacific Ocean; and on the west by Bering Sea and Strait, which separates it from Russian Siberia. The international boundary between Canada and the United States is chiefly that of the 141st meridian of west longitude; but southeast of that, in the region about Dyea, Skaguay, and the head of the Lynn canal, the boundary line is only provisionally determined. The entire area of the territory is estimated at 590,884 square miles, equal (roughly speaking) to one-sixth of the United States. The capital is Sitka (pop., 1,396), on Baranoff Island, in Sitka Sound, and the chief towns are Nome City (pop., 12,486), on Norton Sound; Skaguay (pop., 3,117), at the head of the Lynn canal, the mart where miners purchase their supplies on the way north, by the Chilkoot Pass, to the gold mines of the Klondike and the Yukon; and Juneau (pop., 1,864), at the foot of the Lynn

canal. The population of the entire territory (census of 1900) is given as 63,592. The chief river is the Yukon, which is over 2,000 miles in length; the principal ports are Dyea, Nome, St. Michaels, and Dutch Harbor, on one of the Aleutian Islands, west of the Alaskan Peninsula. The Pribyloff Islands, in Bering Sea, are the main seat of the seal fisheries. Gold mining is at present the chief industry of Alaska, and has been encouragingly prosecuted, the yield of the precious metal for the year 1898-99 being about \$20,000,000. The forest wealth of the territory is also large and valuable, being chiefly spruce, cedar, and hemlock. The drawback to the country, which affects all industry, is, besides its inaccessibility, its Arctic climate, the mercury in winter frequently falling to 60° below zero. Mining under these extreme conditions is, with a short summer and a long winter, environed with difficulties. The Yukon, it is said, sometimes freezes to a depth of 5½ feet; in midwinter, near the Klondike boundary, the sun rises about 10 A. M. and sets from 2 to 3 P. M., the total length of daylight being only about four hours. By contrast, the summers afford a long day's work, there being about 20 hours of daylight. On the coasts there is much fog and an excessive rainfall, though inland the climate is drier and less disagreeable. In the territory, the privations of labor, it will be seen, are great; but despite its rigors it is being eagerly resorted to, especially by those in search of its mineral wealth.

Alaska boundary commission, 12, 176.

settled, 12, 176.

sable, 4, 49.

Albani.—Professional name of Marie Emma Lajeunesse, a famous soprano; born in 1851 near Montreal; a French-Canadian.

Albania.—A region in European Turkey, having Montenegro and Novi-Bazar on the north, Greece and the Gulf of Arta on the south, Macedonia and Thessaly on the east, and the Ionian Sea and the Adriatic on the west.

Alba Longa.—An ancient city of Italy, adjacent to and incorporated with the city of Rome. Its history is mythical. It is said to have been founded by Ascanius, the son of Æneas.

Albano (*äl-bä'nō*).—A town of Italy, situated a few miles from Rome, on the site of Pompey's Villa.

Albans, St.—A city in Hertfordshire, England, named for Alban, the first British Christian Martyr, who was beheaded there in 296.

Albany.—The capital of the State of N. Y. It is situated on the left bank of the Hudson River; is an important commercial city, being

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- the terminus of lines of steamers to New York and other river ports, and of the Erie and Champlain canals, and a center of extensive systems of railroads. It contains the law and medical departments and the Dudley observatory of Union University. It was settled by the Dutch in 1614, was fortified in 1624, obtained a city charter in 1686, was the seat of a convention, under the lead of Franklin, to form a colonial union, in 1754, and became the permanent capital of the State in 1797. Pop. (1900), 94,151.
- Albany Convention**, 11, 66.
Regency, 11, 336.
- Albatross, or Frigate Bird.**—Mr. J. Lancaster, an American naturalist, who spent five years on the west coast of Florida, in studying the habits of aquatic and other birds, states that the frigate bird can live in the air for a week at a time, night and day, without once perching or touching a roost. He timed these birds, and found them able to go at a rate of 100 miles an hour with ease, and that on fixed wings. In Mr. Lancaster's opinion, these birds, up to that speed, could fly just as fast as they pleased. The wings of the frigate bird stretch to an expanse of about 10 or 12 ft., and it passes so much of its time in the air that it has been credited with sleeping on the wing. The albatross has followed the course of a ship for many days without being known to rest. This bird may be termed the monarch of the high seas. It exceeds the swan in size, attains a weight of from 12 to 28 lbs., and extends its wings from 10 to 13 ft. One remarkably large bird shot off the Cape of Good Hope measured 17½ ft. from wing to wing.
- Albatross, The**, 4, 214.
Wandering, 4, 214.
- Albemarle Point.**—The early name of Charleston, S. C.
- Albemarle Sound.**—A body of water in northeastern part of North Carolina. The Roanoke River flows into it; it is separated from the Atlantic Ocean by a series of sand beaches.
- Albert, Francis Augustus Charles Emmanuel.**—Prince Consort of England. Born near Coburg, Germany, 1819; married Queen Victoria Feb. 10, 1840; died at Windsor Castle, England, 1861.
- Albert, Prince Consort**, 10, 449.
- Albertinelli**, 9, 227.
- Albertus Magnus.**—(1193-1280.) Famous scholar, philosopher, and cleric, who lived principally at Cologne.
- Albert Nyanza.**—A large lake in Central East Africa. The White Nile flows through it. It is crossed by the equator.
- Albigenses**, 10, 260.
- Albuquerque.**—One of the principal cities of New Mexico; it is an important railroad center. Pop., about 6,000.
- Alcæus.**—(about 611-580 B. C.) One of the greatest Grecian lyric poets.
- Alcantara** (*äl-kän'tä-rä*).—Knights of a religious and military order of Spain. Established about 1156, still active in its civil capacity.
- Alcantara, Treaty of**, 10, 286.
- Alcazar** (*äl-kä'thär*).—1. In Spain; the palace of the Moorish kings, and afterward the royal establishment at Seville. 2. A palace of Segovia, Spain. Burned in 1862, since restored. Occupied by the Castilian sovereigns from the 14th century.
- Alceste.**—An opera by Gluck; first presented in Vienna, 1767.
- Alcestis** (*al-ses'tis*), or **Alceste** (*al-ses-te*).—A heroine of Greek legend. She is the subject of the play "Alcestis" by Euripides.
- Alcestis**, 10, 92.
- Alchemy.**—The ancient name of those arts which preceded, and laid the foundation of, the modern science of chemistry. It received its greatest impetus from the search of the philosopher's stone, which it was supposed would turn all substances it touched into gold. It is of Arabic origin, as, indeed, is indicated by the initial letters *al*—the Arabic word for "the" which occurs also in al-manac, al-gebra, al-embic, Al-cantara, al-cohol, etc. Some of the greatest names connected with this ancient science are, Geber, Albertus Magnus, Roger Bacon, Raymond Lully, Böttger, Tycho Brahe, and Dr. Faustus.
- Alcibiades**, 10, 200.
- Alcohol.**—The active, intoxicating principle of fermented liquors. It is a hydrate of a hydrocarbon radical, and comprises many bodies of different chemical composition. Ordinary wine alcohol is formed by the breaking up by fermentation of glucose (grape sugar). Absolute or anhydrous alcohol contains no water. It has a sp. gr. at 60° of 0.794. It boils at 173° F., the sp. gr. of its vapor is 1.6133. It has never been frozen. Faraday caused it to thicken at 166° F. below zero. This quality makes it useful for thermometers to measure low temperatures. Spirit of wine or rectified spirit has a sp. gr. of 0.838, is 54 to 58 over-proof, and requires 54 to 58 per cent. of water to bring it down to proof. Proof spirit, the standard of all mixtures of alcohol and water contains 57.27 per cent. by volume and 49.50

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- per cent. by weight of alcohol. A mixture which contains less than this is said to be underproof. When mixed with water, say in the proportion of 2 gallons of alcohol to one gallon of water, the volume of the resultant mixture is less than the combined volume of the two ingredients — that is, it does not measure 3 gallons of mixture. Methylated spirits is a mixture of alcohol of sp. gr. 0.830 with 10 per cent. of common wood spirit. Denatured alcohol admitted or permitted to be made free of duty is alcohol derived from any source but to it is added a poisonous or nauseous ingredient which renders it unfit for drinking. It is intended by the Act of 1906 that in that form it be used in the arts and by manufacturers, but, especially, as a fuel.
- Alcohol**, 5, 230.
 Absolute, 5, 230.
 Anhydrous, 5, 230.
 Ethyl, 5, 230.
 Methyl, 5, 230.
 Proof spirit, 5, 230.
 Rectified spirit, 5, 230.
 Spirit of wine, 5, 230.
 Wine, 5, 230.
 Wood, 5, 230.
- Alcoholic fermentation**, 5, 234.
- Alcott, Amos Bronson**, 8, 270.
- Alcott, Louisa May**, Life of, 8, 270.
- Alcott, Louisa May**, referred to, 14, 6.
- Alcuin**, 9, 273.
- Aldebaran**, a bright star, 5, 140.
- Aldehydes**, 5, 230.
 Acetic, 5, 230.
- Alden, Henry Mills**.—(1836-) An American writer and editor, born in Mt. Tabor, Vt. He was a graduate of Williams College in 1857 and of Andover Theological Seminary in 1860. He became managing editor of *Harper's Magazine* in 1869. Among his best known works are a poem "The Ancient Lady of Sorrow"; a prose work of great beauty, "God in His World," and, in conjunction with Alfred H. Guernsey, of Harper's "Pictorial History of the Great Rebellion," and "A Study of Death."
- Alden, Isabella (McDONALD)**.—(1841-) An American author who wrote under the pseudonym of "Pansy." Her Pansy books attained wide-spread popularity and number a great many volumes. She edited a juvenile periodical called "Pansy" and was associated with the Chataqua Summer School.
- Alden, John**, 11, 52.
- Alden, Joseph, D.D.**.—(1807-1885.) An American educator and author. Professor of Rhetoric at Williams College (1835-1852); professor of Moral Philosophy at Lafayette College, Penn. (1852-1857); president of Jefferson College, Penn. (1857-1867); principal of State Normal School, Albany, N. Y., in 1867. Among his works are: "Christian Ethics," "Elements of Intellectual Philosophy," "The Science of Government," "Hand-book for Sunday School Teachers," "First Steps in Political Economy," and "Thoughts on the Religious Life."
- Alder, The**, 4, 454.
 Heart-leaved, 4, 454.
 Hoary, 4, 454.
 Smooth, 4, 454.
 Speckled, 4, 454.
- Alderney**.—One of the Channel Islands, belonging to England, in the English Channel. It is about 8 miles in circumference and is noted for its breed of cattle.
- Aldgate**.—Eastern gate of the old London Wall. Probably opened during the first years of the reign of Henry I.
- Aldine Press**.—That of Aldus Manutius or Aldo Manuzio, in Venice, which began in 1494 to produce famous first editions of classical works.
- Aldrich, Thomas Bailey**.—(1836-) An American writer, born at Portsmouth, N. H. Editor of the *Atlantic Monthly* in 1883. Among his best known poems are: "The Bells," "Baby Bell," "Flower and Thorn," "Cloth of Gold," "Wyndham Towers," and "Pampinea." Among his novels are "Marjory Daw," "The Story of a Bad Boy."
- Aldridge, Ira**.—(1810-1866.) A negro tragedian known as the "African Roscius"; in early life the valet of Edmund Kean; Othello was one of his chief parts.
- Ale and beer measure**, 13, 219.
- Alectryon**, 10, 94.
- Aleppo**.—A large town in N. Syria.
- Alessandria**.—The capital of the province of Alessandria, Piedmont, Italy. It is a strong fortress, and a railway center. Pop. (1899), 79,015.
- Aleutian Islands**.—A chain of about 150 islands, extending from the western extremity of Alaska nearly to Asia; discovered by the Russians about the middle of the 18th century, and came into the possession of the U. S. with the acquisition of Alaska; apparently of volcanic origin. Fish and fur interests. Pop., about 2,000.
- Alexander Parnese, Duke of Parma**, 10, 299.
- Alexander the Great**, 10, 203; 14, 22.
- Alexandra, Queen**, 14, 276, 330.
- Alexandria**.—A port of entry, and the capital of Alexandria Co., Va. It was occupied by

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- Federal troops in the Civil War May 24, 1861.
Pop. (1900), 14,528.
- Alexandria.**—A city of Egypt, on the Mediterranean, founded by Alexander the Great in 332 B. C. It was a center of universal learning and contained the celebrated library of over 700,000 books which were collected by Ptolemy I. and Ptolemy II. This was the largest collection of books prior to the invention of printing. It is said, though on very doubtful authority, that these were destroyed by Caliph Omar, who conquered the city in 640. Pop. (1897), 319,766.
- Alexandria** bombarded by the British, 11, 18.
- Alexandrines.**—A measure of poetry, consisting of 12 syllables to a line, or 12 and 13 alternated. Pope's criticism of this meter, in his "Essay on Criticism" reads:—
*"A needless Alexandrine ends the song,
That like a wounded snake drags its slow length
along."*
- Alfalda**, 5, 64.
- Alfieri, Viltorio.**—(1749-1803.) An Italian dramatic poet, the son of a nobleman. He formed an attachment for the wife of Charles Edward Stuart, the "Young Pretender." His first dramatic work was "Cleopatra." His "Agis" was dedicated to the memory of Charles I., of England; his "First Brutus" to George Washington; his "Second Brutus" to "the future people of Italy."
- Alford, Henry, D.D. (DEAN ALFORD).**—(1810-1871.) An English poet, divine and scholar. His works comprise poems, hymns, sermons, and lectures. He dedicated an American edition of his poetical works to Longfellow. His "Plea for the Queen's English" and his critical edition of the Greek Testament are well known.
- Alfred the Great**, Life of, 10, 245.
- Alfred the Great** referred to, 14, 188.
- Algæ or sea-weeds**, 5, 99.
Carrageen, 5, 103.
Dulse, 5, 102.
Gulf-weed, 5, 103.
Irish moss, 5, 103.
Sargasso, 5, 103.
Sea-lettuce, 5, 100.
- Alger, Russell Alexander**, 12, 186.
- Alger, Russell A.**, aided by his wife, 1, 240.
- Algeria**, converted to a civilized state by France, 11, 22.
- Algonkian era**, 5, 462.
- Algonquin Indians.**—A North American tribe at the time of the first settlements by Europeans on this continent occupied a much larger area than any other Indian nation; it extended from Labrador to the Rocky Mountains, and from Hudson's Bay to Pamlico Sound.
- Alhambra.**—A suburb of Granada, in Spain, in which stand the exquisite remains of the palace of the ancient Moorish kings. The wall which surrounds it is more than a mile in circuit and is studded with towers. The chief points of interest are: The Hall of the Ambassadors, the Court of the Fish Pond, the Court of the Lions, and the Hall of the Abencerrages. It was begun about 1248 and completed about 1314.
- Alien and Sedition Laws**, 11, 190, 194, 213.
- Alimentary tract**, 1, 276.
- Aliquot Parts**, 13, 15.
- Alison, Sir Archibald.**—(1792-1867.) A Scotch historian; educated at the University of Edinburgh; studied law, and was admitted in 1814. His works, comprising essays, political, historical, and miscellaneous, were originally contributed to *Blackwood's Magazine*. His best known work is the "History of Europe" from the beginning of the French Revolution to the accession of Louis Napoleon. His "Life of the Duke of Marlborough" is also valuable.
- Alizarine**, 5, 249.
- Alkali.**—A substance with basic properties, which is soluble in alcohol or water. The alkalies include such substances as: soda, potash, ammonia, lithia, etc. They turn red litmus blue, have a caustic taste.
- Alkaloids**, 5, 249.
- All hallowmas**, 13, 101.
- All Hallows Day**, 13, 91.
- All Saints' Day**, 13, 91.
- All Souls' Day**, 13, 91, 101.
- Allahabad (City of God).**—The "Holy City" of the Indian Mahometans, at the junction of the Jumna and Ganges rivers in N. W. Hindostan.
- Allan, Sir William**, 9, 285.
- Allatoona (Ga.), Battle of**, 11, 435.
- Alleghany Mountains.**—A chain of mountains crossing the western extremity of Md.; traverses W. Va. and forms part of the boundary between Va. and W. Va.
- Allegheny.**—A river in the United States rising in north of Pennsylvania; flows south 300 miles, and unites with the Monongahela at Pittsburg to form the Ohio.
- Allegiance**, 12, 187.
Oath of, 12, 346.
- Allegri, Gregoria.**—(1580-1652.) An Italian composer; he produced some magnificent religious music, notably the "Miserere," for nine voices and two choirs.

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- Allen, Charles Blairfindie**, known as GRANT ALLEN and also under the *nom de plume* of CECIL POWER, and J. ARBUTHNOT WILSON.— (1848- .) A British scientific writer and novelist, born on Wolfe's Island opposite Kingston, Canada; graduated from Oxford in 1871; connected with Queen's College at Spanish Town, Jamaica, from 1873 to 1877. He lived latterly in England. Among his works are: "Physiological Ethics," "The Color Sense," "The Evolutionist at Large," "Colin Clout's Calendar," "Force and Energy," and his novels "In all Shades," "This Mortal Coil," "What's Bred in the Bone," "Dumaresq's Daughter," "The Duchess of Powysland," "Blood Royal," "Dr. Palliser's Patient," "The Attes of Catullus," "Science in Arcady," "The Story of the Plants," "The Woman Who Did," "British Barbarians," "A Hill-top Novel." In 1885 he contributed a life of Charles Darwin to the Series of "English Worthies."
- Allen, Elisha Hunt.**— (1804-1883.) A politician and diplomatist. He was a Whig member of Congress from Maine (1841-43), and for many years chief-justice of Hawaii; he also served as minister to the U. S. from the Hawaiian Kingdom.
- Allen, Mrs. Elizabeth (CHASE).**— (1832- .) An American poetess who wrote under the pseudonym of "Florence Percy" and is known as Mrs. Akers Allen, from Paul Akers, the sculptor, her first husband. Her first volume, "Forest Buds" appeared in 1855, after which she contributed regularly to the *Atlantic Monthly*. Her second volume which appeared in 1866 contains her well-known poem "Rock Me to Sleep, Mother." "The Silver Bridge" appeared in 1886, "Gold Nails to Hang Memories On" in 1890, and the "High-Top Sweeting" in 1891. From 1873 to 1879 Mrs. Allen was the literary editor of the Portland, Me. *Advertiser*.
- Allen, Ethan, II,** 67.
- Allen, James Lane.**— (1848- .) An American lawyer and author, born in Kentucky. Practised law in Omaha, Neb., settled in Chicago in 1872. He wrote "Allen's Hand-book of the Nebraska Code," "Flute and Violin," "The Blue Grass Region of Kentucky," "John Gray, a Kentucky Tale of the Olden Times," "A Kentucky Cardinal" (1894), "Aftermath" (1895), and "The Mettle of the Pasture" (1903).
- Allen, Ira, II,** 67.
- Allen, Joel Asaph.**— (1838- .) An American naturalist, noted as a mammalogist; was curator of the department of mammalia and birds in the American Museum of Natural History, N. Y. in 1885. He accompanied Agassiz on his expedition to Brazil in 1865.
- Allen, William, 11,** 337.
- Allen, William, 12,** 186.
- Allen, William Henry, 11,** 213.
- Allen, Ex-senator William V.,** on country development of successful men, 8, 98.
- Allentown.**—The capital of Lehigh Co., Pa. Noted for its extensive iron manufactures and a large trade in coal and iron. Pop. (1900), 35,416.
- Allerton, Isaac, 11,** 52.
- Allia, Battle of, 10,** 212.
- Allibone, Samuel Austin, LL. D.**— (1816-1889.) An American bibliographer. While actively engaged in mercantile pursuits he studied literature and contributed to the *North American Review*. In 1882 he became librarian of the Lenox Library in New York. He compiled "A Critical Dictionary of the English Language," "Poetical Quotations from Chaucer to Tennyson," "Prose Quotations from Socrates to Macaulay," and "Great Authors of all Ages." His Critical Dictionary is his greatest work and contains over 46,000 authors with 40 indexes.
- Alligator, The, 4,** 249.
- Characteristics of the, 4, 249.
- Eggs of the, 4, 250.
- Flesh of the, 4, 251.
- Habits of the, 4, 250.
- Hide of the, 4, 251.
- Home of the, 4, 249.
- Oil of the, 4, 251.
- Size of the, 4, 250.
- Alligator Swamp.**—A large swamp in N. C., between Pamlico and Albemarle sounds.
- Allison, William Boyd, 12,** 187.
- Allium cepa, 5,** 70.
- Allonge, 13,** 8.
- Alloys defined, 5,** 212.
- Allspice, 5,** 50.
- Allston, Washington.**— (1779-1843.) An American painter and author, born in Georgetown, S. C. He entered Harvard and studied medicine which he soon relinquished for art. He visited London and became intimate with Benjamin West, then president of the Royal Academy. In 1804 he went to Rome; returned to America in 1809. Two years later he revisited Europe and won the prize of 200 guineas offered by the British Institution. He was chosen an Associate of the Royal Academy in 1819. He then returned to America and lived in Cambridge, Mass. His works as a painter are chiefly Old Testament subjects. His great work, "Belshazzar's Feast" was

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left unfinished. His first wife was a sister of William Ellery Channing, and his second, a sister of Richard H. Dana. He wrote "Monaldi," an Italian romance; "The Hypochondriac," and "Four Lectures on Art." His poetical works were not published until after his death.

Allston, Washington, 9, 330.

All's Well That Ends Well.—A comedy by Shakespeare; played first in 1601.

Almack's (*âl'maks*).—A famous London gaming club, founded in 1763 by William Almack. It became afterward a Whig club and was known as Brook's. 2. Very fashionable assembly rooms, built by Almack and opened to the public in 1764.

Almagro, 11, 39.

Alma-Tadema, Laurens, 13, 262.

Almeida, Garrett, Viscount d'.—(1799-1854.) Author and statesman, the greatest Portuguese poet of the nineteenth century. His works include "Camoens," "Dona Branca," and his last poem "Fallen Leaves."

"Almighty Dollar," 13, 154.

Almond, Symbolism of the, 1, 198.

Almquist, Karl J. L.—(1793-1866.) A Swedish writer made famous by his "Book of the Thorn Rose." His works comprise lyrics, dramas, novels, with many books on history, religion, and ethics.

Alnus cordifolia, 4, 454.

glutinosa, 4, 454.

incana, 4, 454.

rugosa, 4, 454.

Aloe, American, 5, 49.

Aloes, 5, 50.

Alpaca, 4, 93.

Fur of the, 4, 94.

Home of the, 4, 94.

Alpha and Omega.—The first and the last letters of the Greek alphabet, used frequently to express ideas of completion.

Alphabet, 10, 186.

Block letter, 7, 273.

Morse's electric telegraph, 5, 345.

in Italic letters, 7, 273.

in round writing, 7, 274.

in square letters, 7, 274.

used in lettering, Styles of, 7, 273.

Alphabet Used Most Frequently, The Letter of the.—The letter e, which is the only letter in the English language which is used oftener than 100 times out of every thousand letters employed. The e stands first also as regards frequency of use in the French, German, Italian, and Spanish languages. The following letters are the ten English ones most frequently used, namely:—

Out of every 1,000
letters used.

E.....	137
T.....	88
O.....	76
S.....	75
I.....	71

Out of every 1,000
letters used

R.....	70
N.....	66
H.....	65
A.....	64
L.....	40

As initial letters the order is very different; the order of the ten most frequently so used being: R, S, C, P, A, T, D, M, F, and I. The four letters most seldom used are z, j, q, and x; while the four least frequently used as initial letters are K, Y, Z, and X. Other languages would require the various letters in different proportions. In Latin and French q and u would be deficient, h would be in excess, and w would be needless. The Welsh language requires a larger supply of d, y, w, and l, and does not require j, k, q, or x.

Alpheus River, 10, 106.

Alphonso II. of Portugal, 10, 286.

Alphonso III. of Portugal, 10, 286.

Alphonso V. of Portugal, 10, 286.

Alphonso Henriques, 10, 285.

Alps.—The highest mountains of Europe, and the most celebrated in the world in point of scenic beauty. About three-fifths of Switzerland occupy these mountains which constitute the culminating ridge of the mountains that border upon Germany, France, Austria, and Italy. A number of the Alpine summits tower above 12,000 ft. Some of them exceeding 15,000 ft. Among the subdivisions of the Alps are the Unterwald Alps, the St. Gothard group, the Pennine Alps, the Alps of Glarus and Schwyz, the Alps of Grisons, and the Bernina group.

Alps crossed by Hannibal, 10, 215.

Alps crossed by Napoleon, 10, 348.

Alsace or Elsass.—Formerly part of the Kingdom of Austria. Incorporated with the German Empire in 10th century. Restored to France in entirety, 1697. Reconquered by Germany, 1870.

Alsike Clover, 5, 63.

Altai Mountains.—In Central Asia. The highest summit is about 11,000 feet.

Alter Ego (Latin, "a second I").—One's double or counterpart. In the play of the Corsican Brothers, the same actor performs the two brothers, the one being the alter ego of the other.

Altgeld, John Peter, 12, 187.

Althæa officinalis, 5, 67.

Alto Relievo.—Figures in marble or castings, raised or projecting from the tablet.

Alum, Composition of, 5, 222.

Alum.—A whitish saline substance with astringent, sweetish taste. It is a double salt, composed of the sulphates of alumina and potash.

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- It occurs in regular 8-sided crystals. The chief sorts of alum are: potash, soda, ammonia, chrome potash, iron, and manganese alum. It is much used as a mordant in dyeing, also in tanning, and in medicine to stop bleeding. It also serves to impart whiteness to bread.
- Aluminum or Aluminium.**—A metal found in clay, feldspar, slate, and other rocks and minerals. It is white, very malleable, ductile, tough as iron, and takes a high polish. It melts at 1292° F. and may be cast. It does not rust, oxidize or tarnish in air or water. It is lighter than glass, and only one-fourth the weight of silver. It is a good conductor of heat and electricity. It alloys with other metals, and as the processes of extraction become more easy it is rapidly becoming cheap enough for much more extended use.
- Aluminum gold,** 5, 211.
- Aluminum group of chemical elements,** 5, 214.
- Ores of, 5, 439.
- Clay, 5, 440.
- Cryolite, 5, 440.
- Properties of, 5, 214.
- Sources of, 5, 214.
- Alva, Duke of** (Ferdinand Alvarez von Toledo).—Prime Minister and General of Spanish armies. Noted for his rigorous suppression of the revolt of the Netherlands, 1567.
- Alva, Duke of,** 10, 299.
- Alveolar process,** 1, 273.
- Alverstone, Baron,** 12, 176.
- Amadis of Gaul** (*am' a-dis ov gál*).—The hero of a famous medieval romance, the origin of which is not known, but which is thought to have been translated from a Portuguese work, afterward lost.
- Amalgam,** 5, 210.
- defined, 5, 212.
- Amaranth,** 5, 50.
- Symbolism of, 1, 199.
- Amateur Photography,** 6, 355.
- Amazon, The.**—The principal river of South America, and the largest on the globe, has its source in the Andes of Peru and Ecuador, and flows almost due eastward to its mouth in the Atlantic Ocean near to the equator. Its length is estimated at 3,300 miles, and it drains, with its tributaries, about a third of the South American continent. Its mouth was discovered in 1500 by one of the brothers Pinzon, the Spanish navigators: it is navigable for large vessels for 2,200 miles, the tide ascending it for 400 miles. It is connected on the north with the Orinoco, in Venezuela, by the Rio Negro and the Cassiquiare. The main mouth of the mighty stream is 50 miles in width, and it is a mile wide, 2,500 miles from its Atlantic exit, near the Peruvian frontier. Its banks abound in forests, and in low elevations the river frequently overflows and submerges large areas of fertile land. This occurs during the rainy season, or when the great wave bore, or eagre, comes in with a mighty and often destructive sweep from the sea. The valley of the upper Amazon is covered with dense stretches of valuable timber and a variety of tropical plant and animal life most interesting to the botanist and naturalist. This sea of verdure covers an area of many thousand miles.
- Amazons.**—Fabled warlike tribes of women in Asia, Africa, and Scythia.
- Ambassador,** 12, 187.
- Amber.**—A sort of resin of vegetable origin, but now appearing like coal, as a product of the mineral formation. Pale-yellow in color, transparent, brittle, and capable of electrical excitation on being rubbed. This quality combined with its Greek name, elektron, has given us the word "electricity." Its sp. gr. is 1.065 to 1.070. It is mentioned in Homer and was well known to the Ancients. It is found on the shores of the Baltic Sea, especially after storms. The largest piece ever found is said to be in the royal cabinet in Berlin, it weighs 15 pounds and is valued at £1,500 (\$7,500). Amber is used for mouthpieces for pipes; though an artificial amber composed of copal, camphor, and turpentine is much used. It is supposed that the fine tone of the Cremona violins is largely due to the use of an amber varnish.
- Amber,** Fabled origin of, 1, 193.
- Ambergris.**—A fatty substance found floating in the sea in lumps varying from half an ounce to 100 lbs. and upward. It is also taken from the bowels of the spermaceti whale. It is found in the Bahama Islands, East Indies, the coasts of Africa, Brazil, Japan, and China. It is much used in perfumery, and is worth about \$30 an ounce.
- Ambidexterity,** Teaching a child, 2, 76.
- Ambitious Laborer, The,** a Turkish fable, 3, 182.
- Amboyna.**—Chief of the Molucca Isles. See MOLUCCAS.
- Ambrose,** Bishop of Milan, 10, 232, 259.
- Amen Ra,** 10, 65.
- Amende Honorable.**—A form of punishment prevailing in France in the 9th century. The offender, usually a traitor, was partly stripped, and with a rope around his neck, and a taper in his hand, was taken to court and compelled to beg pardon of God and his country. In modern usage, the term signifies an apology to one who has been injured.

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"America."—A wooden keel schooner-yacht, owned by Commodore J. C. Stevens of the New York Yacht Club, in 1851, who entered her in the race of Aug. 22, open to yachts of all nations for a £105 cup. The course was around the Isle of Wight, and the "America" beat the entire fleet of 18 yachts by about seven miles. The cup was eventually given to the N. Y. Yacht Club and made a prize open to challenge by yachts of all nations.

America.—The entire Western continent, embracing North, Central, and South America and neighboring islands. It derives its name from Amerigo Vespucci, an early explorer whose descriptions of the country were widely published. Norsemen visited it as early as A. D. 1000, and there are traditions of Chinese and Irish discoveries; but it was only after the voyage of Columbus in 1492 that its existence became generally known in Europe. In 1507 the geographer Waldseemüller, in a treatise, "Cosmographical Introductio," first suggested that the continent be called America. On the north it includes the Arctic regions, and extending southward, all the land between the Atlantic and Pacific oceans to Cape Horn, the lowest point of South America. The upper portion of the habitable territory embraces a central basin divided by a watershed (within which are Hudson's Bay and its feeders on the north), drained by the Mississippi, Missouri, Ohio, and other rivers and their tributaries, which find an outlet into the Gulf of Mexico. This enormous basin is inclosed on either side and separated from the oceans by the Rocky and Appalachian Mountains, which ranges assume the general form of the letter V. The St. Lawrence runs transversely to the general course of the other rivers in the basin. In South America, the Andes, an extension of the Rocky Mountains, follows the line of the Pacific coast, and the general trend of the rivers is toward the southeast, except those north of the Amazon, which empty into the Caribbean Sea. The entire continent has great natural wealth in flesh, furs, minerals, and vegetables. Few of its original inhabitants, usually called Indians, survive.

America, 11, 36.

Discovery of, 10, 283.

America, Influence of the French Revolution in, 11, 173.

"America for Americans," 12, 188.

American bittern, 4, 225.

American Colonization Society, The.—A society organized at Washington, D. C., in 1817, for the purpose of colonizing free American negroes. A tract of land was purchased near

Cape Mesurado, Africa, and the colony of Liberia was founded, which became an independent republic in 1847.

American conference, International, 12, 308.

American eagle, 4, 133.

American flag, 11, 67.

American goldfinch, 4, 182.

American grievance against France and England, 11, 200.

American hare, 4, 43.

American Indian Mythology, 10, 128.

American Philosophical Society, 11, 214.

American Protective Association, 12, 188.

American rabbit, 4, 40.

American red flamingo, 4, 225.

American Republics, Bureau of, 12, 188.

American skylark, 4, 173.

American system, 11, 337.

American three-toed woodpecker, 4, 179.

American Union, Order of the, 12, 347.

American velvet plant, 5, 17.

American Volunteers, The.—A religious organization founded in March, 1896, by Mr. and Mrs. Ballington Booth, who had separated from the Salvation Army. In its plans and methods it was designed to be essentially American.

American white pelican, 4, 216.

Americanisms in the English language, 8, 366.

Ames, Fisher.—(1758-1808.) A noted American orator, statesman, and political writer.

Ames, Joseph.—(1816-1872.) An American painter.

Ames, Mary Clemmer.—(1839-1884.) An American writer; the author of several novels, volumes of poems, sketches, etc.

Ames, Oakes, 12, 188.

Amethyst, 5, 447.

Fabled origin of the, 1, 193.

February birthstone, 1, 197.

Amethyst.—A variety of quartz, of a beautiful violet-blue or purplish-violet color due to impregnation of peroxide of iron or manganese. It is much used in jewelry and is found in India, Ceylon, and Brazil; though poor specimens occur abundantly everywhere. The Ancients believed that if worn around the neck it could prevent drunkenness, and, indeed, the name means, in Greek, *unintoxicated*.

Amherst College aid to poor students, 8, 46.

Amiel, Henri Frederic.—(1821-1881.) A Swiss poet and philosopher of French extraction. He published little during his lifetime; but left a large private journal, "Journal Intime," upon which his fame rests.

Amiens.—City of Picardy, France. Its noted cathedral was built in 1220.

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- Amistad Case.**—The case of the U. S. against the Spanish vessel "Amistad," which was seized by negroes near Cuba when coming from Africa with a cargo of kidnapped slaves. They sailed to the coast of Conn., where the vessel was captured by a U. S. vessel. On a libel for salvage, the U. S. Supreme Court held on appeal that the negroes were free and were not pirates.
- Ammen, Daniel.**—(1820-1898.) An American naval officer; retired as rear-admiral in 1878.
- Ammen, Jacob.**—(1808-1894.) A general in the U. S. army.
- Ammonia.**—A very volatile gas with pungent odor. It is obtained from gas-manufacture as a by-product. It was formerly made from the horns of deer, etc., hence its common name of hartshorn. It is extremely soluble in water, forming the ordinary ammonia of commerce. It contains 32 per cent. by weight of the gas and has a sp. gr. of .891. It is present in rain-water, which washes it out of the air in its fall. Ammonia is an important fertilizer as it contains nitrogen—its formula being NH_3 —which is so essential to plant growth. Ammonia salts are often called the nitrogen-carriers.
- Ammonia** a freezing agency, 5, 168.
described, 5, 173.
in the air, 5, 154.
of value to plant life, 5, 154.
- Ammonium**, 5, 174.
chloride, 5, 208.
salts, 5, 208.
sulphide, 5, 208.
- Amnesty**, 12, 188.
- Amoy**, a free port, 10, 161.
- Ampère**, an electrical unit, 5, 420.
- Amphibrach**, 3, 407.
- Amphictyonic Council.**—A council composed of 12 of the most virtuous men of various cities of ancient Greece to control the general interests of the nation. It is said to have been founded by Amphictyon in 1498 B. C., at Thermopylæ. It was still in existence in 31 B. C.
- Amphitrite**, 10, 99.
- Ampudia, General**, 11, 316.
- Amrita**, 10, 10.
- Amsterdam, New** (*am'ster-dam*).—An early name for New York City.
- Amsterdam.**—North Holland, the chief commercial city of the Netherlands. Pop. (1899), about 525,000.
- Amsterdam.**—A city in Montgomery Co., N. Y. It has important manufactures of knit goods. Pop. (1900), 20,929.
- Amur River**, Russia secures the left bank of, 11, 26.
- Amurath II.**, 10, 288.
- Amusements for a rainy day**, 2, 144.
of children, Hints to mothers on the, 2, 151.
- Ana**, the spirit of heaven, 10, 54.
- Anabasis, The**, 10, 189.
- Anacreon** (*a-nak'rē-on*).—(563-478 B. C.) A famous Greek lyric poet.
- Anæsthetics.**—Substances which produce insensibility to pain, either total or local. They include such as: Chloroform, ether, nitrous oxide or laughing gas, cocaine, thymol, aconite, belladonna, chloral, phenol, and Indian hemp. It is only within the nineteenth century that their use has been known. Since their introduction the science of surgery has made wonderful advances. Their discovery is probably one of the greatest boons to humanity.
- Anæsthetics**, 5, 229.
- Anagram.**—The transposition of the letters of a word, phrase, or sentence to form other words. Some of the most remarkable are:—
(1) "*Quid est veritas?*" (Pilate's question "What is truth?")
"*Est vir qui adest.*" "It is the man who is here."
(2) Horatio Nelson—*Honor est a Nilo.* (Honor is from the Nile.)
(3) Florence Nightingale. Flit on, cheering angel.
- Analogy**, Reasoning from, 2, 169.
- Analysis as a mental process**, Value of, 2, 168.
- Ananias.**—A Christian Jew of Jerusalem; struck dead, for lying and fraudulent practices.
- Anapest**, 8, 407.
- Anatomy**, 1, 272.
- Anatomy of Melancholy, The.**—A famous work by Robert Burton, published in 1621.
- Anaxagoras** (about 500-428 B. C.).—A Greek philosopher and student of astronomy and mathematics.
- Ancestor worship** of the Chinese, 10, 35.
- Andalusia.**—A large and fertile region in south of Spain. Its name was originally Vandalusia, from the Vandals who settled in it in the 5th century. It is called the garden and granary of Spain. The purest Spanish is spoken within its area. It covers 33,340 sq. m. and has a population of 3,500,000.
- Andaman Islands.**—On the east side of the Bay of Bengal. They are divided into the Greater and Lesser Groups, and number in all from 3,000 to 3,500 islands. The total area is 2,508 sq. miles. The inhabitants occupy the lowest stages of civilization, and are very dark with crisp woolly hair. They seldom exceed five feet in height. They are under British control.
- Andersen, Hans Christian.**—(1805-1875.) A Danish author; especially famous for his fairy tales.

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Anderson, Joseph, 11, 67.

Anderson, Mary Antoinette (MRS. NAVARRO).

—A noted American actress. Her first appearance on the stage was at Louisville, Ky., in 1875, when she scored a great success as Juliet. After a remarkably successful career in England as well as in America, she retired from the stage in 1889.

Anderson, Richard Henry.—(1821-1879.) A general of the Confederate army.

Anderson, Robert, 11, 436.

Anderson Case, 11, 337.

Andes (Spanish, *Cordillera de los Andes*).—A South American range of mountains, which with the Alps in Europe, form the two chief mountain systems of the world. The Andes extend for 4,500 miles along the west coast of the continent, parallel to the Pacific Ocean, from near the Isthmus of Panama to Cape Horn. The range has a high average elevation (about 13,000 feet, though a number of the peaks, many of them containing volcanoes, rise abruptly from the coast to a height of 22,900 feet. The chief summits are Chimborazo, Cotopaxi, Aconcagua, Sorata, Illimani, and Tolima. The range covers an area of over a million square miles, and has a breadth varying from 50 to 350 miles. This vast system is classed by geographers under different names, derived from the state or country through which it passes, *viz.*, the Patagonian, Chilian, Bolivian, Peruvian, Ecuadorian, Colombian, and Venezuelan Andes. The volcanoes occur chiefly in Ecuador among the Andes of Quito. The range incloses many fertile plains and tablelands, including lakes and the sources of the chief rivers. One of the principal sheets of water in the Andes is Lake Titicaca, which lies at an elevation of 12,800; while the river Amazon has its source in the range, and drains a basin of about two and a half million square miles, with an entire length of 3,300 miles. The river is navigable for large vessels (steamers, etc.), for 2,200 miles, and is a free highway to all nations. There are a number of passes which cross the Andes at different points, but all are at a high elevation, ranging from twelve to fifteen thousand feet, and at Aconcagua a railway now traverses the great barrier, a wonderful engineering feat. The range has a variety of climate, and a characteristic animal and plant life. The animal life includes alpacas, llamas, condors, pumas, and jaguars, and the tropical parts are the home of a number of beautiful humming birds. Varied and valuable are the economic resources of the Andes,

which embrace rich lodes of the chief metals, including gold, silver, copper, and lead. Emeralds are also found in the Tunca mines near Bogota. The rock and strata features of the Andes are interesting to geologists and mineralogists. The fruit of both tropical and temperate zones is to be found in many of the sheltered plains of the Andes, as well as many magnificent trees, palms, and other vegetation. On the loftier peaks there is almost perpetual snow, though the warm Pacific winds make salubrious the climate of the lower elevations.

Andorra.—A remarkable republic in the Spanish territory of Catalonia, comprising an area of 175 sq. m. Population estimated at 6,000. It is said to have been declared a free state by Charlemagne for the services rendered by its people against the Moors.

Andover.—A town in Essex Co., Mass., the seat of Andover Theological Seminary, Phillips Academy, and the Abbot Female Academy. Pop. (1900), 6,813.

Andrassy note, The, 11, 11.

André, John, 11, 67.

Andrew, James Osgood, 11, 337.

Andrew, Saint, 13, 91.

Andromeda, 5, 137.

Andromeda, a constellation, 5, 139.

Andromeda, 10, 111.

Andronicus (*an-drō-ni'kus*) **I. Comnenus.**—(1110-1185.) Byzantine Emperor.

Andronicus II. Palæologus.—(1259-1332.) Byzantine Emperor.

Andronicus III. Palæologus.—(1296-1341.) Byzantine Emperor.

Andros, Sir Edmund, 11, 47.

Androscoggin (*an-dros-kog'in*) **River.**—Rises in the northern part of New Hampshire and northern Maine, flows into the Kennebec.

Andrus, John E., 8, 207.

Anemom'eter.—An instrument for measuring the force, direction, and velocity. The invention was first made by a Dr. Robinson, in 1846, and consists of four hollow cups, on horizontal arms of equal length, turning on a vertical axis. This axle is connected with a set of wheels, in an inclosed frame, which give it support, and which record the number of revolutions made by the cupped arms as they are whirled round by the wind. The rotation of the cups on this wind-vane thus enables one to calculate the rate or velocity of the wind. Other forms of the instrument, such as that known as Osler's pressure anemometer, have been constructed and deemed more accurate. In Osler's instrument a brass plate is fastened by springs on a vane in such a way that the varying pressure of the wind on the plate

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- causes the springs to yield in corresponding degrees, and this is recorded on a moving sheet of paper by a pencil fastened to the vane; and the pencil records the changes in the direction of the wind, and still another, guided by a rain gauge, indicates the amount of rain that has fallen.
- Anemone**, Wood, 5, 21.
- Angel**, Benjamin Franklin, 12, 189.
- Angel**, Gold coin of England, 13, 156.
- Angelica tree**, 4, 477.
- Angell**, James B., on college men in business, 8, 202.
- Anger is wrong**, 2, 211.
- Anger**, Speaking to a child in, 2, 211.
- Angle**, 7, 250.
 Acute, 7, 250.
 Obtuse, 7, 250.
 Right, 7, 250.
 To bisect a given, 7, 277.
 Vertex of an, 7, 250.
- Angler**, The, 4, 288.
 Characteristics of the, 4, 288.
 Reproduction of the, 4, 288.
- Angles**, 8, 357.
 Geometrical construction of, 7, 276.
- Angles** invade Britain, 10.
- Angles**, To draw, 7, 267.
- Anglo-Saxons**.—The people who have resulted from the union of the German tribes, the Angles, Saxons, and Jutes who crossed over from the peninsula of Jutland—the modern province of Schleswig-Holstein—with Hengist and Horsa to Britain in 449. They wrested the country from the ancient Britons whom they drove west into Wales and north into Scotland. The Anglo-Saxons lived for a time under seven separate kings, but combined for defense when necessary. The seven kingdoms formed the Saxon Heptarchy. Egbert (827) was the first king of all England or Angles-land as it was then called. The people were much harassed by the Danes, and were afterward conquered by the Norman-French under William the Conqueror (1066), who became king of England under the title of William I. Then followed a union or blending of the two races, in which, however, the strong racial characteristics of the Anglo-Saxons are in no wise obliterated.
- Anglo-Saxon** element in the English language, 8, 359.
- Angola**.—A Portuguese province of South Africa, with a coast line of 1,000 miles. Area 484,800 sq. miles; population 4,119,000. The chief exports are coffee and rubber.
- Angry** with children, What to do when, 2, 212.
- Angular** measure, 13, 148.
- Angus** cattle, 4, 16.
- Anhydride** defined, 5, 175.
- Aniline**.—A substance originally obtained from indigo, but now derived from coal-tar, the refuse of gas-making. It is an oily colorless fluid, yet it is the base of the numerous aniline dyes numbering some hundreds. To produce them, the aniline is treated with an acid, which forms a base. These bases are in many cases colorless and only develop tints when converted into salts.
- Aniline**, 5, 243.
- Animal** instinct, 2, 2.
- Animal** stories a means of exciting responsiveness in children, 2, 282.
- Animals and Birds** by Ernest Thompson Seton, 4, 3.
 Capable of inference, 2, 167.
 Classification of, 4, 9.
 Killing for sport, 4, 4.
- Animals**, List of books on, suggested by Ernest Thompson Seton, 4, 7.
- Animals, Relative Ages of**.—The average age of cats is 15 years; of squirrels and hares, 7 or 8 years; rabbits, 7; a bear rarely exceeds 20 years; a dog lives 20 years, a wolf 20, a fox 14 to 16; lions are long-lived, the one known by the name of Pompey living to the age of 70. Elephants have been known to live to the age of 400 years. When Alexander the Great had conquered Porus, king of India, he took a great elephant which had fought valiantly for the king, and named him Ajax, dedicated him to the sun, and let him go with this inscription, "Alexander, the son of Jupiter, dedicated Ajax to the sun." The elephant was found with this inscription 350 years after. Pigs have been known to live to the age of 20, and the rhinoceros to 29; a horse has been known to live to the age of 62, but they average 25 or 30; camels sometimes live to the age of 100; stags are very long-lived; sheep seldom exceed the age of 10; cows live about 15 years. Cuvier considers it probable that whales sometimes live 1,000 years. The dolphin and porpoise attain the age of 30; an eagle died at Vienna at the age of 104; ravens have frequently reached the age of 100; swans have been known to live to the age of 300. Mr. Malerton has the skeleton of a swan that attained the age of 200 years. Pelicans are long-lived. A tortoise has been known to live to the age of 107 years.
- Animals That Can Leap the Greatest Distance**, The.—The galago, or flying lemur. This singular animal is a native of the Indian Archipelago. It is from 2 ft. to 3 ft. in length, and is furnished with a sort of membrane on

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each side of its body connecting its limbs with each other; this is extended and acts as a parachute while taking its long leaps, which measure about 300 ft. in an inclined plane. The kangaroo can leap with ease a distance of between 60 ft. and 70 ft., and can spring clean over a horse and take fences from 12 ft. to 14 ft. in height. The animals that can leap the greatest distance in proportion to their size are the flea and the grasshopper, the former being able to leap over an obstacle 500 times its own height, while the grasshopper can leap for a distance measuring 200 times its own length. The springbok will clear from 30 ft. to 40 ft. at a single bound. The flying squirrel, in leaping from tree to tree, often clears 50 ft. in a leap. This animal also has a broad fold of skin or membrane connecting its fore and hind legs. A steeplechase horse, called The Chandler, is reported to have covered 39 ft. in a single leap at Warwick some years ago. Some species of antelopes can make a leap 36 ft. in length and 10 ft. in height. A lion and a tiger each clear from 18 ft. to over 20 ft. at a bound while springing on their prey. A salmon often leaps 15 ft. out of the water in ascending the falls of rivers.

Anise, 5, 50.

Anjou (*an' jö*).—An ancient government of France.

Anjou, Battle of (22d Mar. 1421).—Between English and French, commanded by the dauphin. The English were defeated with a loss of 1,500.

Ankle-joint, 1, 274.

Anna Karenina.—Tolstoi's most important novel. Published in 1878.

Annals of a Quiet Neighborhood.—A novel by George McDonald.

Annam, or **Anam** (*a-nam* or *än-nam*).—In the eastern part of Indo-Chinese peninsula. A French protectorate. Population about 5,000,000.

Annam, taken by France, 10, 163.

Annan, The, 14, 261.

Annapolis.—A seaport, the capital of Md., situated on the Severn, two miles from Chesapeake Bay; the seat of the U. S. Naval Academy, and of the non-sectarian St. John's College. It was founded in honor of Queen Anne, and became a city in 1649. It was at first named Providence, then Anne Arundel Town, and finally Annapolis. It was one of the seats of the Continental Congress (1783-84); Washington here resigned his commission as commander-in-chief (1783). Pop. (1900), 8,402.

Annapolis, Appointments to, 13, 373.

Convention, 11, 214.

Naval Academy at, 12, 342.

Ann Arbor.—The capital of Washtenaw Co., Mich.; situated on the Huron River; the seat of the University of Michigan. Pop. (1900), 14,509.

Annatto, or **Annatta**.—The reddish pulp surrounding the seeds of the Bisca Orellana, a tree growing in Guiana and other parts of South America. It yields a bright orange dye, which is much employed in coloring butter and cheese.

"Anne," The, 11, 44.

Anne Boleyn, 10, 436.

Anne of Austria.—Daughter of Philip III. of Spain: wife of Louis XIII. of France. Queen of France, 1643-61.

Anne of Brittany.—(1476-1514.) Daughter of Francis II., duke of Brittany: wife of Charles VIII. of France; afterward wife of Louis XII.

Anne of Cleves, 12, 301.

Anne of Denmark.—(1574-1619.) Queen of England and Scotland: daughter of Frederick II. of Denmark; wife of James VI. of Scotland, afterward James I. of England.

Anne of England, 10, 327, 444.

Anne of Geierstein.—Title of a romance by Sir Walter Scott, published 1829.

Annealing glass, 5, 201.

Annexation, 12, 189.

Anno Domini, 13, 92.

Annuity.—A sum of money payable yearly, for a given number of years or for life.

Annunzio (*än-nön'tzi-ö*), **Gabriele d'**.—An Italian poet, novelist, and playwright. Born 1864.

Annus mirabilis, 13, 92.

Anona cherimolia, 4, 475.

muricata, 4, 475.

reticulata, 4, 475.

squamosa, 4, 475.

Anopheles, 4, 355, 357.

Breeding of the, 4, 357.

Crucians, The, 4, 357.

Maculipennis, 4, 357.

Punctipennis, 4, 357.

Ant Battle, An, 4, 337.

Common meadow, 4, 334.

farmer, The, 4, 335.

Habits of the farmer, 4, 336.

Hunter, 4, 337.

Leaf-cutting, 4, 335.

Little black, 4, 334.

Habits of the, 4, 334.

Parasol, 4, 335.

Pavement, 4, 333.

Red, 4, 333.

Habits of the, 4, 334.

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Ant.—Continued.

- White, 4, 334.
 Destruction of the, 4, 335.
 Habits of the, 4, 334.
- Antæus** the Giant, 10, 107.
- Antalcidas**, Peace of, 10, 189.
- Antares**, a star, 5, 143.
- Ant-bear**, The, 4, 83.
- Ant-eater**, The little, 4, 83.
- Ant-eaters**, The, 4, 83.
 Food of the, 4, 83.
 Habits of the, 4, 83.
- Ante-Date**.—To date earlier than the real time.
- Antelope**, African, 4, 30.
 Chamois, 4, 30.
 Eland, 4, 30.
 Hunting the, 4, 31.
 Pronghorn, 4, 31.
 Sable, 4, 31.
 Species of, 4, 30.
 Waterbuck, 4, 31.
- Antelopes**, 4, 30.
- Anther of stamen**, 5, 11.
- Anthology**, The.—A collection of several thousand Greek poems, covering a period of about 1,000 years from the time of the Persian war. The first anthology was prepared in the first century B. C. by Meleager of Gadara.
- Anthon**, Charles.—(1797–1867.) An American classical teacher and writer.
- Anthony** (*an' tō-ny*), **Saint**.—(251–356 A. D.) An Egyptian Abbot; founder of asceticism.
- Anthony**, Susan Brownell, Life of, 8, 273.
- Anthony of Padua**.—(1195–1231.) Franciscan Monk, preacher, and theologian.
- Anthony's Nose**.—A promontory near the southern entrance of the Highlands, N. Y., projecting into the Hudson between West Point and Peekskill.
- Anthracite**, 5, 455.
- Antietam** (Md.), **Battle of**, 11, 436.
- Anti-Federalists**, 11, 214.
- Antilles**.—Under this term, all the West India Islands except the Bahamas are usually included. Cuba, Jamaica, Haiti, and Porto Rico constitute the Greater Antilles. The Lesser Antilles are composed of two chains, one extending in a curve from Porto Rico to the Gulf of Paria, northeast of Venezuela, and the other westward, north of that country to the Gulf of Maracajbo. The Spaniards called the latter chain the Leeward Islands and the former the Windward Islands, but, to be exact, the Leeward Islands are those above the 15th parallel, north latitude, and the Windward Islands those below that line.
- Anti-Masonic Party**, 11, 337.
- Anti-Masons**, The, 11, 283.

Anti-Monopolists, 12, 189.

Antimony (Symbol *Sb*—Latin *Stibum*).—Atomic weight 122. A brittle metal of a bluish-white color. It is very easily powdered, and melts at 842°F. It is a bad conductor of heat and electricity. It does not tarnish or rust; it forms several alloys with other metals, forming Britannia metal, type-metal, pewter, and white or anti-friction or Babbit-metal. It is much used in medicine in such forms as Tartar emetic, butter of antimony, etc. It forms many compounds and two classes of salts and bases.

Antimony, Properties of, 5, 197.

Sulphide of, in safety matches, 5, 196.

Antinous, 3, 385.

Antioch.—The ancient capital of the Greek kings of Syria, situated on the left bank of the Orontes, 14 miles from the sea, in Asia Minor. It was called "Antioch the Beautiful" and "The Crown of the East." At one time it had 500,000 inhabitants, and rivaled even Rome itself. It rose to the dignity of the first Christian city—it was here that the name *Christians* was first used. It was besieged and taken by the Crusaders in 1098. It shows few traces of its former grandeur.

Antioch taken by the Crusaders, 10, 258.

Antiochus Epiphenes, 10, 184.

Antipater, 10, 207.

Anti-Rent Party, 11, 338.

Antiseptics.—Substances which prevent putrefaction and similar changes. The chief antiseptic agents—those which destroy or prevent germ life upon which the changes depend—are: low temperature, dry air, heat, common salt, saltpeter, alcohol, sulphurous acid, boracic acid, Burnett's solution, Condy's fluid, Platt's chlorides, nitrate of silver, creasote, chlorine, carbolic acid, charcoal, dry-mold, etc. In anti-septic surgery, iodoform, corrosive sublimate, thymol, eucalyptus, and carbolic acid find an extensive use as sprays, washes, and cleansing agents.

Antiseptics, Use of, 1, 358.

Anti-toxin for diphtheria, 5, 96.

Anti-trust legislation, 12, 180.

Antium.—A town in Latium in Italy. It was a favorite resort of wealthy Romans; but it is chiefly notable as being the birthplace of Caligula and Nero. Perhaps more especially noted as being the place where some of the most famous works of art have been discovered, as the Apollo Belvidere and the Borghese gladiator.

Antochthan, 10, 81.

Antoinette, Marie, 10, 413.

Antoninus Pius, 10, 228.

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Antony, 10, 226.

Antony and Cleopatra, 10, 395.

Ants, 4, 332.

Characteristics of the, **4, 332.**

Habits of the, **4, 333.**

Reproduction of, **4, 333.**

To destroy, **1, 127.**

Antwerp.—The chief commercial city of Belgium, on the Schelde, 27 miles N. of Brussels. It is the Liverpool of the continent although it is 52 miles from the sea. Pop. (1899), 282,018. It is remarkable for its trade and commerce and the enterprise of its merchants. It is closely associated with the great names of Flemish art. Its cathedral is the finest specimen of Gothic architecture in Belgium. It is 500 ft. long, 250 ft. wide, supported by 125 pillars and topped by a spire of exquisite design, 403 feet high. It contains the two finest paintings of Rubens, the Elevation of, and the Descent from, the Cross.

Antwerp, Siege of, 10, 299.

Aorta, The, 1, 281.

Apache Indians.—Now numbering about 6,200, confined on reservations in Arizona, New Mexico, and Oklahoma. They were anciently a confederation of the Athabaskan stock of North American Indians and included at least a dozen tribes. In 1598 they occupied north-western New Mexico and subsequently extended over the valley of the Gila River. In 1800 they had spread from the Colorado River to Central Texas and as far south in Mexico as Durango. Ably led by such chiefs as Cochise, Mangus, Colorado, and Geronimo, they have given the government much trouble. Settlers opposed the government's plan to remove them to a reservation in New Mexico and in April, 1871, more than 100 Apaches were massacred at Fort Grant, Ariz.

Apartment life, 1, 4.

Apatite.—A mineral chiefly composed of phosphate of lime. It occurs in a variety of forms and colors and is easily mistaken for other minerals. It is much used in the preparation of fertilizers chiefly by acting upon it by sulphuric acid and forming a soluble phosphoric acid so essential to plant life. When crystals occur, they may be readily recognized by their six-sided form.

Ape, The long-armed, 4, 65.

Apelles, 14, 111.

Apennines.—A range of mountains running the entire length of the Italian peninsula.

Ape's head, a Latin fable, 3, 176.

Apheka, Temples at, 10, 84.

Aphis, or green fly, 5, 48.

Aphrodite, 10, 94.

of Cnidos, **9, 363.**

Apis.—A sacred bull worshiped at Memphis, in Egypt.

Apocalypse.—The Revelation of St. John, written in the Isle of Patmos, about 95 A. D. It was not finally and fully accepted until the Council of Trent, 1545.

Apocrypha (*Gr. concealed writings*).—The books and treatises which the early church claimed were inspired but were not included in the canon of scripture. The general application of the term is restricted to 14 books added to the Hebrew Bible: I Esdras, II Esdras, Tobit, Judith, Esther, Wisdom of Solomon, Ecclesiasticus, Baruch, Song of the Three Children, History of Susanna, Bel and the Dragon, Prayer of Manasses, I Maccabees, and II Maccabees.

Apollo, 10, 90.

Apostle of the Indians, 11, 46.

Apostles (*Gr. One sent forth*).—In 31 A. D. 12 were appointed by Christ, *viz.*, Simon Peter and Andrew (brothers), James and John (sons of Zebedee), Philip, Nathaniel (or Bartholomew), Matthew (or Levi), Thomas, James the Less (son of Alphæus), Simon and Jude, or Thaddeus (brothers), and Judas Iscariot. Matthias took the place of Judas Iscariot in 33 A. D., Paul and Barnabas were appointed in 45 A. D.

Apostles' Creed is not of apostolic origin. "The source is supposed to be two sermons spuriously attributed to St. Augustine, and found in the appendix to his works." Its use was ordained by the Greek church at Antioch, and in the 11th century in the Roman Catholic Church, whence it passed to the Church of England.

Apostolic succession is the claim to the transmission of that authority and power—by the laying on of hands—which Christ gave to his Apostles. The doctrine is held by all Roman Catholics and some Episcopalians. It exacts a form of ordination as a necessary qualification to the ministry.

Apothecaries' fluid measure, 13, 149.

weight, **13, 149.**

Appalachian Mountains.—A great mountain system in the eastern part of North America, extending from the Gulf of St. Lawrence to northern Ala. It contains large deposits of coal and iron. Its length is about 1,500 miles and its greatest width is about 130 miles. Its highest point is Mitchell's Peak in N. C. which is 6,710 feet high.

Appendix, The, 1, 278.

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Appian Way (*Via Appia*).—A famous early Roman highway, which ran from Rome to Brundisium (Brindisi). The period of its construction was from 312 to 244 B. C.

Apple, Common, 4, 437.

Crab-apple, 4, 438.

Family, 4, 437.

Apples, Golden, 10, 107.

Appleton, John, 11, 338.

Appomattox (Va.), **Battle of**, 11, 436.

Appraise.—To set a value on goods, commodities, or personal effects.

Appraiser.—One sworn and appointed to place a value on goods and estates.

Approved accountant, 13, 1.

Apricot, The, 4, 438.

Apries, 10, 180.

April, 13, 92.

Apsara, 10, 10.

Apteryx, the bird without wings, is a native of New Zealand. It is as large as a hen and is of a reddish-brown or gray color. It has the rudimentary wings hidden under downy feathers. It lies in holes in the daytime and comes out at twilight. The female lays, twice a year, a very large egg, and the male assists in the process of hatching.

Aqua regia, 5, 223.

Aquarium, Largest, in the World.—The three largest aquariums in the world are those at Brighton, Hamburg, and Paris. The Brighton (England) Aquarium, which takes the lead, has forty-one tanks, containing all varieties of fish, from the stickleback to the sturgeon. Its area is 715 ft. in length by 100 ft. in breadth. Some of the tanks are of vast capacity. There is one in particular, which contains 110,000 gallons of water, and has a plate-glass front, through which the habits of very large fish may be studied. The Hamburg Aquarium is nearly the same size as that at Brighton. The Paris Aquarium, belonging to the French Acclimatisation Society, in the Bois de Boulogne, is fifty yards in length by about twelve in breadth, and contains forty tanks.

Aquarius, the water-carrier, a constellation, 5, 145.

Aquifoliaceæ, 4, 412.

Aquinas, Thomas, Saint.—(1224-1274.) An Italian theologian. He studied at Cologne under the famous Albert of Bollstadt, known as "Albertus Magnus." His collected "Works" published at Rome in 1570 fill eighteen large volumes and are masterly contributions.

Aquitaine.—An ancient division of the southwestern part of France, the seat of a West-Gothic kingdom, early in the fifth century.

After many historic changes it was finally conquered by the French in 1451-53.

Arabia.—The great southwestern peninsula of Asia. Its greatest length is 1,800 miles, and its greatest width, about 600. Its population does not exceed 5,000,000. It lies between the highlands of Syria and Mesopotamia on the N. and the Arabian Sea on the S. On the W. is the Red Sea and the Suez Canal and on the E. the Persian Gulf and the Gulf of Oman. About two-thirds of the entire country is fertile, one-third is desert and uninhabitable. The interior is not well known yet. The foremost place in the history of the country is occupied by Mohammed, and it is his connection with it that makes it most interesting to us. Arabia gives us coffee, which is indigenous to Arabia and Africa, tobacco, cotton, indigo, tamarinds, frankincense, myrrh, senna, spices, aloes, dates, and kindred products. The land is also rich in mineral products and precious stones. The inhabitants are made up of the wandering Bedouins, and the settled tribes called Hadesi and Fellahs. The Arab is of medium stature, muscular physique, and brown complexion. The most important animals are the camel and the horse. The best are reared in Nejd, but are never sold out of the country.

Arabian fairy tales, 3, 25.

Arabian Nights' Entertainment.—Tales of East Indian, Persian, and Arabian origin, first made known in Europe by Antoine Galland, a French Oriental scholar, who translated them and called them the Thousand and One Nights (from the number of nights occupied in their recital).

Arabic legends of the Old Testament, 3, 213.

Arabi Pasha heads insurgent movement in Egypt, 11, 17.

Arachne, 10, 90.

Arachnida, 4, 320.

Arachnoid membrane, 1, 287.

Aragon.—A kingdom in N. E. of Spain.

Arali, the abode of the dead, 10, 54.

Aralia panax, 4, 477.

quinquefolia, 4, 477.

spinosa, 4, 477.

Arapaho Indians.—Of Algonquin stock, this tribe dwelt around the sources of the Platte and Arkansas rivers, and representatives of it may yet be found from the Yellowstone to the Rio Grande. Arapaho is said to mean "tattooed people." Nearly all of the tribe occupy two reservations—the Arapaho in Ind. Ter., and the Shoshone in Wyo.

Ararat.—A district in Armenia in Asia Minor. Here are found the twin mountains of Ararat,

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with the greater of which the landing of the Ark is associated. The Greater has a height of 17,112 feet and Little Ararat rises to a height of 12,840 feet. Great Ararat is a huge, broad-shouldered dome supported by strong buttresses. Little Ararat is an elegant, shapely cone with smooth sides, and very regular in outline.

Arbela, Battle of, 10, 189.

Arbitrage, 13, 9.

Arbitration, 13, 9.

Arbitration in law, 13, 135.

International, 12, 189.

Paris tribunal of, 12, 348.

Arbor Day, 13, 92, 100.

Arbor vitæ, 4, 457.

Arbuthnot and Ambrister, 11, 338.

Arbutus, Symbolism of, 1, 199.

Trailing, 5, 10.

Arcadia.—The central and highest point of the Peloponnesus, which is the almost insular portion of ancient Greece. The early inhabitants remained long in a state of barbarism, tended cattle and hunted among the mountains. Their lives were simple, and they were passionately fond of music, and dancing. They were devoted to the worship of Pan and Artemis. So both ancient and modern poets have regarded Arcadia as an ideal land of peace, innocence, and simplicity.

Arc de Triomphe de l'Étoile (*ärk dé trêôn f dè lä-twäl'*).—A triumphal arch at the head of the Champs Élysées, 160 feet high, 146 feet wide. Begun by Napoleon I. in 1806, completed in 1836.

Arcadius, 10, 232.

Arcas, 10, 89.

Arch, 5, 418.

Archæan era of the world, 5, 462.

Archangel.—A city in north of Russia. It was the one seaport of Russia until the docks were formed at Cronstadt, and the foundation of St. Petersburg in 1703. Pop. (1890), 20,000.

Archery, 6, 151.

Arrow, The, 6, 153.

Bow, The, 6, 151.

Parts of the, 6, 152.

Stringing the, 6, 154.

Instructions, General, 6, 155.

Quivers, 6, 155.

Targets, 6, 155.

Archilocus.—(?714-676 B. C.) First of the Greek lyric poets. He was born on the island of Paros. In popularity he ranks with Homer. The fragments of his works which have come down to us are marked by bitter satire.

Architects, Women as, 7, 331.

Architecture, European Church, 9, 415.

in France, Church, 9, 418.

Influence upon American builders of ecclesiastical, 9, 421.

Basse-Oeuvre, The, 9, 419.

Byzantine Church, 9, 416.

Cathedral, The ancient, 9, 421.

Cathedral of Amiens, 9, 420.

Churches of Byzantium, 9, 416.

Earliest example of the Gothic Church in France, 9, 420.

Gothic Church, 9, 420.

San Marco Church, 9, 417.

Santa Sophia Church, 9, 415.

Archon, 10, 191.

Arcola, Battle of, 10, 348.

Arctic Circle.—A circle drawn around the North Pole, at a distance from it of $23\frac{1}{2}^{\circ}$, the inclination of the earth's axis to the plane of its orbit. Within this area there is a period during which the sun does not set, and another when it does not rise, the length of the period increasing as one approaches the Pole.

Arctic three-toed woodpecker, 4, 179.

Arcturus, a star, 5, 145.

Arden, Forest of.—A dense wooded tract formerly lying between the Avon and the Severn extending northward indefinitely. It is the scene of Shakespeare's "As You Like It."

Ardwark, The, 4, 83.

Are, 13, 153.

Area of a circle, To find the, 13, 151.

of an ellipse, To find the, 13, 151.

of a parallelogram, To find the, 13, 151.

of a rectangle, To find the, 13, 151.

of a square, To find the, 13, 151.

of a trapezoid, To find the, 13, 151.

of a triangle, To find the, 13, 151.

Areopagus.—The highest court or council of elders of Athens, which sat on the Hill of Ares, or Mars. It is of unrecorded antiquity, and its power and dignity lasted for many centuries.

Areopagus, 10, 192.

Ares, the god, 10, 98.

Arethusa.—A fountain in the island of Ortygia in Syracuse. The fable goes that an Arcadian nymph was turned into a fountain by Artemis to save her from the attentions of the river-god Alpheus, then to have flowed under land and sea and reappeared in Syracuse.

Argentine Republic.—With an area of 1,118,000 sq. miles it is the largest of the Spanish-American republics. Its great river system is that of the Rio de la Plata. The jurisdiction of the republic covers the whole South Atlantic coast, all of Patagonia east of the

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- watershed of the Andes, and all of Tierra del Fuego east of the meridian of the mouth of the Strait of Magellan. Argentina has been independent since 1816; it consists of 14 self-governing provinces and several territories; only those who can read and write may vote. The Constitution resembles that of the United States, except that it acknowledges a state church, the Roman Catholic, and provides that the President shall be elected for six years and be ineligible for reëlection. It is probably the most prosperous of the Republics of South America. The surface is level; the climate healthful; and the soil fertile and productive. The forests yield timber, and the plains, called pampas, support vast herds of cattle and sheep. The products are wool, hides, wheat, tobacco, flaxseed, sugar, and maize. Population 4,042,990; capital, Buenos Ayres.
- Argillaceous**, iron ore, 5, 437.
- "Argo,"** 10, 108.
- Argon**, in the air, 5, 153.
- Argonautic Expedition**, 10, 108.
- Argonauts**, 10, 108.
- Argos**, Siege of, 10, 207.
- Argus**, Fable of, 4, 203.
- Argus-Eyed.**— Watchful and wary. The phrase is derived from Argus, surnamed the "All-seeing" a legendary hero, the guardian of Io, slain by Hermes, and said to have had a hundred eyes.
- Argyle.**— A shire in W. of Scotland. It is the second largest county in Scotland. Its area exceeds 2,000,000 acres, including a number of islands.
- Argyle's** rebellion in Scotland, 10, 326.
- Argyll, George John Douglas Campbell**, eighth duke of (1823-1900). An English author and statesman, a member of Gladstone's cabinet. He has been the champion of theism. Among his works are "The Reign of Law," "Primeval Man," "The Unity of Nature," "Scotland as It Was and as It Is," "The Unseen Foundations of Society."
- Argyll**, Anecdote of the duke of, 8, 56.
- Ariadne**, 10, 102, 109.
- Arians.**— Followers of Arius, an Alexandrian (336). They held that the Son of God was above all men, but not equal to the Father. Their doctrines have been the cause of violent controversy among the churchmen.
- Aries**, the ram, a constellation, 5, 140.
- Ariosto, Ludivico.**— (1474-1533.) One of the greatest of Italian poets.
- Ariosto**, 8, 266.
- Arisæma**, 5, 16.
- Arista, General**, 11, 316.
- Aristeides**, 10, 195.
banished, 10, 196.
Life of, 10, 198.
- Aristophanes.**— (452-380 B. C.) Most famous Greek comedy writer. His chief writings embrace "The Clouds," which hits at Socrates; "The Acharnians" and "The Frogs," which aim at Euripides; and "The Knights" at Cleon. In his works there is humor and wit as well as satire, and lyric strains of a wild woodland sweetness.
- Aristotle.**— (384-322 B. C.) Ancient Greek philosopher, pupil of Plato and tutor of Alexander the Great. He was the most prolific writer of the ancient philosophers and most of his works have survived. Taught that all knowledge was obtained from outer sources through experience; that logic is the great instrument; that philosophy includes all sciences except history; that nature is a machine energized by a first cause. His school of philosophy is called the "Peripatetic" (from the Greek "to walk about"), based upon his methods of conducting classes in groves. His works were published in 35 vols. in 1891 by Barthelémy St. Hilaire.
- Arithmetic**, Addition, 13, 9.
Decimals, 13, 17.
Division, 13, 15.
Interest, 13, 20.
Multiplication, 13, 12.
Percentage, 13, 19.
Short cuts in, 13, 9.
Subtraction 13, 15.
- Arizona.**— One of the territories belonging to the U. S. of America. Bounded on the north by Utah, east by N. Mex., south by Mexico, west by Cal. and Nev. It was explored by the Spaniards in the 16th century; was acquired from Mexico in 1848, and, with an additional part by the Gadsden purchase in 1853, was organized as a territory in 1863. It has often been disturbed by wars with the Apaches and other Indians. Contains twelve counties, its capital is Phoenix; Tucson, Yuma, Prescott, Jerome, Nogales, and Flagstaff are principal towns; area, 113,020 sq. miles. Pop. (1900), 122,212.
- Arkansas.**— One of the group of southern states of the U. S. of America, west of and bordering on the Mississippi River. Bounded on the north by Mo., east by Tenn. and Miss., south by La., west by Tex. and Ind. Ter. The surface is generally level or rolling, with the Ozark Mountains in the northwest; it is an agricultural state and its chief products are cotton and corn. First settled by the French

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- in 1685 and formed part of the Louisiana Purchase of 1803; admitted to the Union in 1836; seceded May 6, 1861, and was one of the Confederate States during the Civil War; readmitted to the Union in June, 1868; capital Little Rock; has 75 counties; has no large cities but many thriving towns, chief of which are Fort Smith, Helena, Hot Springs, Pine Bluff, and Texarkana. Area, 53,850 sq. miles; pop. (1900), 1,311,564; called the Bear State.
- Arkansas Post (Ark.), Battle of**, 11, 437.
- Arkansas River**.—The second largest tributary of the Mississippi. It rises in the Rocky Mountains; its length is about 2,000 miles, and its extreme width about one mile. Is navigable 800 miles from its mouth.
- Ark of the Covenant** (Exodus XXV).—The only piece of furniture in the "holy of holies" of the ancient Jewish tabernacle. It was of shittim wood, 2½ cubits long, 1½ cubits broad and high, overlaid with gold within and without. The solid gold lid was the "mercy seat" overshadowed by two golden cherubim facing. It contained the two tables of stone, a pot of manna and Aaron's rod. It was carried during the 40 years wandering of the Israelites, deposited in Solomon's temple in 1004 B. C. and probably destroyed in the destruction of Jerusalem, and burning of the temple by Nebuchadnezzar in 587 B. C.
- Arkwright, Richard**, 13, 262; 14, 169.
- Ariberg Tunnel**, 5, 421.
- Arlington, Lord**, 11, 43.
- Armada, Spanish**, 10, 440.
- Armada, The Spanish**.—A great fleet sent by Philip II. of Spain in 1588 to invade England. It comprised 132 vessels, with about 20,000 sailors, commanded by the Duke Medina Sidonia. The fleet was met and defeated by 80 or 90 vessels, under Lord Howard of Effingham, in the English Channel, and what was left of it was wrecked in seeking escape northward.
- Armadillo**, Characteristics of, 4, 84.
 Flesh of the, 4, 84.
 Habits of the, 4, 84.
 Home of the, 4, 84.
 Nine-banded, 4, 83.
- Armed Neutrality**, 11, 215.
- Armenia**.—A district in southwestern Asia, shared by Turkey, Persia, and Russia. It has belonged successively to Assyria, Media, Persia, Greece, and Rome. The people are Christians governed by patriarchs, not subject to Rome. Turkish cruelties to the Armenian Christians, in 1894 and 1895 aroused the sympathy of the Christian world.
- Armenian Fables**, 3, 177.
- Armies of the World**, 12, 193.
- Arminians**.—Protestant followers of James Arminius of Leyden, Holland; founded 1610; separated from Calvinists, rejecting predestination, etc. Its doctrines were condemned in 1619, and their adherents were exiled till 1625. Arminian doctrines were favored by James I. and Charles I. of England.
- Armistead, George**, 11, 215.
- Armistead, Lewis Addison**, 11, 437.
- Armour, Philip D.**, referred to, 14, 284.
 on the Secret of Success in Life, 8, 123.
 Example of, 14, 47, 187.
- Armour Institute of Technology**.—Established in Chicago, by Philip D. Armour, to assist young men and women in preparing themselves for business.
- Arms and Ammunition**, 12, 190.
- Arms, Exercises for the**, 6, 21.
- Armstrong, John**, 11, 67.
- Armstrong, Samuel Chapman**.—(1839-1893.) An American officer in the Civil War, founder and principal of the Hampton Institute (Virginia) for negroes and Indians.
- Army, The**, 12, 190.
 German, a wonderful machine, 14, 37.
- Arne, Thomas Augustine**.—(1710-1778.) An English composer and author. He produced several operas, and a number of songs; was appointed doctor of music by the University of Oxford in 1759.
- Arnold, Benedict**, 11, 67.
- Arnold, Sir Edwin**.—(1832-) An English author, journalist, and poet. He graduated with high honors from Oxford in 1854. On his return from India he became one of the editors of the London Daily Telegraph. His best known work is the "Light of Asia," an exposition of the teachings of Buddha. Among his other works are the "Light of the World," "The Tenth Muse," "East and West," and "The Voyage of Ithobal."
- Arnold, Matthew**.—(1822-1888.) An English poet and essayist, the son of Dr. Thomas Arnold of Rugby. It is almost certain that as a poet, Matthew Arnold will be ranked next to Tennyson and Browning among the Victorian poets. His prose writings cover a vast number of subjects and his "Essays on Criticism" establish his place very solidly among critics.
- Arnold, Matthew**, quoted on Culture, 9, 212.
- Arnold, Thomas, D. D.**—(1795-1842.) An English educator and historian. He is best known as the master of Rugby. His "History of Rome" written as it was in the moments that he could seize from a busy life, though it is incomplete, is his greatest work.

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- Throughout it is brilliant and picturesque. The most striking passages are those in which he portrays the character of famous men of Rome.
- Aromatic**, spirits of ammonia, 1, 360.
- Aronson, Dr.**, 14, 379.
- Aroostook War**, 11, 338.
- "Arrow,"** outrage in China, 10, 161.
- Arrowroot**, 5, 51.
 Brazilian, 5, 51.
 English, 5, 51.
 Oswego, 5, 51.
- Arsenals**, 12, 192.
- Arsenic**.—A name popularly applied to a poisonous substance. Arsenious acid is in reality a metal the symbol of which is As, and the atomic weight 75.
- Arsenic**, Marsh's test for, 5, 197.
 Properties of, 5, 197.
- Arseniuretted hydrogen**, 5, 197.
- Arsine**, 5, 197.
- Art**, Art student at the Metropolitan Museum of, 9, 334.
 dependent upon observation, 2, 163.
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- Art Galleries**, Famous, 9, 272.
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 Luxembourg Gallery, 9, 272.
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 Pitti Pallazo Gallery, 9, 272.
 Uffizi Gallery, 9, 272.
 Vatican Gallery, 9, 272.
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- Art, Home study of**, 1, 201.
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 Charcoal for drawing, 1, 202.
 China painting, 1, 210.
 Drawing board, 1, 202.
 Drawing instructions, 1, 203.
 Forming a class, 1, 201.
 Geometrical forms for drawing, 1, 202.
 Illustrating, Instruction in, 1, 205.
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 Modeling in clay and wax, 1, 227.
 Oil-painting, Instruction in, 1, 206.
 Painting on silk, 1, 224.
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 Pottery, 1, 215.
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- Art, Home study of—Continued.**
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- Art**, Impetus given by the Centennial Exhibition to, 9, 329.
- Art in Dress**, 1, 157.
- Art**, Its value in education, 9, 186.
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 of the fifteenth and sixteenth centuries, French, 9, 259.
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 Students' League, 9, 331.
 The practical side of American, 9, 338.
 work on a newspaper, 8, 470.
- Artabanus**, 10, 188.
- Artabazus**, 14, 378.
- Artagnan**.—One of the principal characters of Alexander Dumas's "Three Musketeers," and its sequels.
- Artaxerxes I., Longimanus**, 10, 188.
- Artaxerxes II., Mnemon**, 10, 189.
- Artemis**, 10, 93.
- Artemus Ward**.—The pseudonym of Charles Farrar Browne (which see).
- Arteries, The**, 1, 281.
- Artesian Wells** are perpendicular borings into the earth. The most celebrated artesian well is at Grenelle, near Paris. This was bored in 1833-41, and is 1,798 ft. deep. It yields 516½ gallons of water a minute. One at Pesth yields, at a depth of 3,182 ft., water of a temperature of 165° F. In the U. S. numerous wells have been sunk to great depth, two at St. Louis, Mo., 2,197 and 3,843½ ft. deep respectively; several in Chicago of from 700 to 1,200 ft.; one in Louisville, Ky., 2,086 ft. One in Columbus, Ohio, 2,775½ ft., with many others from 500 to 2,000 ft.
- Artesian Wells**, 5, 163.
- Arthropoda**, 4, 320.
 how divided, 4, 320.
- Arthur, Chester Alan**, 12, 194.
 Administration of, 12, 161.
- Arthur, King**, 3, 434.
- Arthur**, nephew of King John of England, 10, 262.
- Arthur, Timothy Shay**.—(1809-1885.) An American author of fiction having a moral aim. He was a member of the "New Jerusalem" (Swedenborgian) Church. He wrote "Ten Nights in a Bar Room," "Six Nights with the Washingtonians," and over 100 volumes of fiction.
- Arthurian Legend**, 3, 433.
 The story of Tristan, 3, 436.

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Artichoke, 5, 51.

Jerusalem, 5, 51.

Artificial respiration, 1, 356

Artists, Birthplaces of famous American, 8, 108.

Society of American, 9, 331.

Artois, Count of, 10, 371.

Arts are kindred, 9, 341.

Aruna, 10, 28.

Arundelian Marbles, or **Oxford Marbles**.—

Comprise 128 busts, 37 statues, and 250 inscriptions in Greek. These were found in the island of Paros in 1610; collected by W. Petty; purchased by Lord Arundel; given by his grandson Lord Howard, to the University of Oxford, in 1667. The inscriptions have been of the utmost value in fixing dates in history from 1582 to 355 B.C.

Aryan is a name applied, since 1845, to the group of languages of modern Europe, which from their similarity point to a common origin from the Aryans. The latter lived in early times in the strip of land lying between the Oxus and Jaxartes rivers, in Western Asia, which flow into the sea of Aral. This group includes (1) the Græco-Latin, comprising the languages of Greece and Rome and the Romance Languages, *i. e.*, Italian, French, Spanish, Portuguese, and Roumanian. (2) The Celtic (which was once the language of nearly all of Europe, but is now confined to parts of France, Scotland, Ireland, Wales, and the Isle of Man). (3) The Germanic, which includes the High and Low German, English, Frisian, and Scandinavian. (4) The Slavonic, which takes in the various dialects of Russia and a great part of Austria. The Indian branches of the Aryan tongue are older and include the Sanskrit, which is the parent language of the Hindoos, and bears the nearest resemblance to the ancient Aryan tongue; and the Zend, which was the language of the ancient Persians. From the similarities which exist between all these languages, the philologist, not only proves that the people who speak the various languages are sprung from the same parent stock, but can tell the order of the outgoing of these branches from the original home.

Aryans, 8, 354.

Asafœtida, 5, 51.

Asbestos, 5, 448.

Asboth, Alexander Landor, 11, 438.

Ascension.—A lonely island nearly in the middle of the South Atlantic, 685 northwest of St. Helena. It is $7\frac{1}{2}$ miles long and 6 miles wide. Used by the English as a coaling and victualing station.

Ascham, Roger.—(1515-1568.) An English scholar and Latin secretary to Queen Mary in 1553, and later to Queen Elizabeth. He is called "the father of English prose." His principal work, not published, however, until after his death, is the "Schoolmaster."

Asculum, Battle of, 10, 207.

Asgard, The gods of, 10, 119.

Ash, Black, 4, 417.

Blue, 4, 418.

Green, 4, 419.

Manna, 5, 4.

Mountain, 4, 438.

Red, 4, 418.

White, 4, 417.

Ashantees.—War-like negro tribe of W. Africa.

Ashanti, or **Ashantee**.—A negro kingdom N. of Gold Coast in West Africa. The population exceeds 1,000,000. The principal exports are gold-dust and palm-oil. The slave-trade was formerly extensive. Capital is Coomassie.

Ashburton treaty, 11, 338.

Ashby, Turner.—(1824-1862.) A general in the Confederate army.

Ashe, John, 11, 68.

Ash-leaved maple, 4, 408.

Ashmun, Jehudi, 11, 339.

Ashtaroth, 10, 82.

Ashtoreth, 10, 82.

Ash Wednesday, 13, 92.

Asia.—The largest of the grand divisions of the earth. It has an estimated area of 17,255,890 sq. miles and an estimated population of about 825,000,000. With more than one-half the inhabitants of the earth, so vast is its surface that the density of its population is only one-third that of Europe. Asia embraces all varieties of climate, physical feature, religion, and civilization. Mongolians predominate in the southeast and north, Aryans in the middle, and the Semitic peoples in the southwest. The countries of Asia are India, China, Japan, Siberia, Korea, Borneo, Sumatra, Annam, Siam, Burma, Tibet, Afghanistan, Baluchistan, Turkestan, Persia, Arabia, Asiatic Turkey, Japan, and the Philippine Islands.

Asia, Russian policy in Central, 11, 26.

The struggle for, 11, 24.

Asimina triloba, 4, 475.

Asparagus, 5, 51.

Aspasia, wife of Pericles, 10, 393.

Aspen, 4, 426.

Large-toothed, 4, 427.

Tradition concerning the, 4, 427.

Asphalt, **Asphaltum**, or **Mineral Pitch**.—A form of bitumen of a black or black-brown color. It is found in rock-oil localities, and

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is formed by the drying up of petroleum. It is most abundant near the Dead Sea, in some of the West Indies (notably Pitch Lake in Trinidad), France, Switzerland, and Dalmatia. It is used for varnish, paving purposes, and paint.

Asphodels, 5, 68.

Aspinwall, William, 11, 68.

Ass, The, 4, 15.

Ass and the frogs, a Turkish fable, 3, 184.

Ass and the nightingale, a Russian fable, 3, 207.

Ass and the Wolf, a German fable, 3, 192.

Assam, Acquisition by England, 11, 15.

Assayers' weight, 13, 150.

Assessments, Political, 12, 197.

Assets, 13, 20.

Assignee, 13, 20.

Assignment, 13, 21.

Associated Press, 8, 470.

Assr, The hour of, 3, 215.

Assume, 13, 21.

Assurance, 13, 21.

Assured, 13, 21.

Assyria, History of, 10, 181.

Assyrians, Home of the, 10, 49.

Assyriology, 10, 48.

Assyro-Chaldean Mythology, 10, 48.

Astarte, 10, 82.

Aster, 5, 33.

Aster, China, 5, 34.

New England, 5, 34.

Astor Library.—A library in the City of New York, founded by John Jacob Astor and opened in 1854. It was then a reference library only, consisting of about 260,000 volumes. In 1895 it was combined with the Lenox Library and the proposed Tilden Library, as the New York Public Library.

Astor Place Riot, 11, 339.

Astor, John Jacob, referred to, 14, 141.

Astor, William Backhouse.—(1792-1875.) Son of John Jacob Astor, American capitalist.

Astor, William Waldorf.—Great grandson of John Jacob Astor. United States Minister to Italy 1882-85; author and publisher. Born 1848.

Astoria.—A fur-trading post established on the coast of what is now Oregon, about 1808, by John Jacob Astor.

Astragalus bone, 1, 274.

Astrakhan (*äs-trä-chän'*).—Capital of the government of Astrakhan, in southeastern Russia. Pop. (1897), 113,001.

Astrolabe.—An unfinished work by Chaucer, supposed to have been prepared for the instruction of his son.

Astrology (the science of the stars) formerly included all that is comprehended by the modern term astronomy, and also a study of the effects of the heavenly bodies upon human destiny, to which latter meaning it is now wholly restricted. Ancient races, but most especially the Chaldeans, devoted much attention to it. Whatever may be said concerning the science, it is quite clear that the modern science of astronomy owes much to the study of the heavenly bodies by the astrologists of old.

Astronomical discoveries of Galileo, 10, 279.

Astronomy, 5, 105.

Chaldean, 10, 55.

Records of, 10, 181.

Astyages, 10, 186.

Asurbanipal, 10, 182.

Asurnasirpal, 10, 181.

As You Like It.—Comedy by Shakespeare, produced about 1599.

Atahualpa, 11, 39.

Atalanta, 10, 112.

Atalanta's race, 10, 112.

Atchafalaya.—A branch of the Mississippi River; flows into the Gulf of Mexico, 120 miles west of New Orleans.

Atchison.—The capital of Atchison Co., Kan. It is situated on the Missouri River, is an important railway center, and has large manufactures of flour, machinery, etc. Pop. (1900), 15,722.

Ate.—Daughter of Jupiter, the goddess of retribution.

Athaliah, 10, 83.

Athelstan, 10, 249.

Athene, 10, 89.

Statue of, 9, 358.

Athens.—The capital of ancient Attica and modern Greece, was named in honor of Pallas-Athene—the Roman Minerva. It is famous by reason of its power and of the number of its illustrious citizens.

It is situated in the southeast of the mainland. Its port is Piræus, about six miles distant, on Phaleron Bay. Among the most important points of interest are the Acropolis, the Parthenon, the Propylæa, the Erechtheum, the temples of Theseus, and Jupiter Olympus. The population in 1896 was 111,486.

Athens.—City, Clark Co., Ga., on the Oconee River, 135 miles N. E. of Atlanta. Population (1900), 10,245.

Athens.—The capital of Athens Co., Ohio, founded 1801; the seat of Ohio University. Pop. (1900), 3,066.

Athens, Badge of, 1, 201.

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- Atherton, Charles Gordon**, 11, 339.
- Athletics *versus* Gymnastics**, 6, 18.
- Athos**.—A mountainous peninsula extending from the coast of Macedonia into the Ægean Sea. Xerxes cut through this isthmus to escape the rough sea around the promontory.
- Atkins, John, D. C.**, 11, 438.
- Atkinson, Edward**.—Born at Brookline, Mass., 1827. An American economist and statistician. He wrote "Our National Domain" (1879), "Cotton Manufactures of the United States," "Railroads of the United States," etc. He strongly opposed the retention by the U. S. of the Philippine Islands and other insular possessions acquired from Spain by the treaty of 1898. He died in Boston, Mass., on December 11, 1905, of acute indigestion.
- Atkinson, Henry**, 11, 329.
- Atlanta**.—The capital of Ga. and of Fulton Co., and the largest city in the state. It is an important railway center, has an extensive trade in cotton, tobacco, etc., and has large manufactures of cotton, iron, flour, etc. It is the seat of Atlanta University (colored), founded about 1845. It was taken by Sherman Sept. 2, 1864, and was partly burned previous to his departure on his "March to the Sea" (Nov. 15, 1864). It became the state capital in 1868. There was a cotton exposition at Atlanta in 1881. Pop. (1900), 89,872.
- Atlanta (Ga.), Battle of**, 11, 438.
Campaign, 11, 439.
- Atlantic and Pacific railroad**, 12, 348.
- Atlantic Cable**, 5, 348.
- Atlantic City**.—Seaside resort in Atlantic Co., N. J., 60 miles from Philadelphia and 146 from New York.
- "Atlantic Monthly" established**, 8, 349.
- Atlantis**.—A mythical island in the Atlantic Ocean, referred to by ancient writers.
- Atlantosaurus**, 5, 465.
- Atlas**.—In Greek Mythology a Titan. Son of Tapetus and Clymene, father of the Pleides, the Hyades, and the Calypso. He was believed to support the world upon his shoulders.
- Atlas**, or first cervical vertebra, 1, 273.
- Atlas, the god**, 10, 107.
- Atlas Mountains**, Legend of, 10, 110.
- Atlixco (Mexico), Battle of**, 11, 339.
- Atmosphere**, Effect on Rocks, 5, 427.
- Atomic theory**, 5, 150.
weight, 5, 151.
- Atropin**, 5, 53.
- Atropos**, 10, 103.
- Attachment**, 13, 21.
- Attention**, Concentrated, 2, 158.
Passive, 2, 158.
- Attila**, King of the Huns, 10, 232.
- Attorney**, 13, 21.
Power of, 13, 183.
- Attorney-general**, 12, 197.
- Attorneys-general**, List of the, 12, 197.
- Attraction**, Force of, 5, 253.
- Attucks, Crispus**, 11, 68.
- Auber (ō-bār) Daniel François Esprit**.—(1782-1871.) French musician, composer of many operas, among others "Fra Diavolo," and "Les Diamants de la Couronne."
- Aubigné d', Theodore Agrippa**.—(1550-1630.) Famous French scholar.
- Auburn**.—(1) The capital of Androscoggin Co., Me. It has manufactures of cotton, boots, and shoes, etc. Pop. (1900), 12,951.
- Auburn**.—The capital of Cayuga Co., N. Y., situated at the outlet of Owasco Lake, the seat of a state prison, conducted on the "silent" or "Auburn" system. Pop. (1900), 30,345.
- Aubusson tapestry**, 1, 36.
- Auchmuty, Sir Samuel**.—(1756-1822.) British general.
- Auckland**.—A seaport of New Zealand on the northern part of North Island. Population, 1891, about 50,000.
- Auction**, 13, 21.
- Audhumbla**, 10, 118.
- Audit**, 13, 21.
- Auditory nerve**, 1, 284.
- Audubon, John James**.—(1780-1851.) A celebrated American ornithologist. His original researches and studies of birds in the American woods rendered him famous as a scientist.
- Auerbach, Berthold**.—(1812-1882.) A German novelist of Jewish parentage. He was the author of some forty works of fiction. They are philosophical in treatment. His fame was made by his novel "On the Heights."
- Augean Stables**.—Stables or stalls in which Augeas, the Greek King of Elis, kept uncleansed for 30 years a herd of 3,000 oxen. It was the task undertaken by Hercules, a mighty mythological hero, worshiped for his courage and secret physical strength, to cleanse this stable, which he did by causing two rivers to run through it.
- Augeas**.—King of Elis, noted for his wealth in oxen of which he fed 3,000 head in his stables, 1624.
- Augsburg**.—A city of Bavaria, which flourished greatly in the Middle Ages. It has been the scene of several memorable church councils, notably that held in 952, when the celibacy of the priesthood was ordered. It has sustained several severe sieges in war, having been last

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taken by the French in 1805, by whom it was, in 1806, restored to Bavaria.

Augsburg Confession.—The chief standard of faith in the Lutheran Church. It was erected at a diet held at Augsburg in 1530.

Augur, Christopher Colon.—(1821-1898.) A general in the U. S. army. He was graduated from West Point in 1843; served on routine duty till the Civil War, when he was made a brigadier-general of volunteers and later a major-general. He commanded a division under Banks at Cedar Mountain; was transferred to the Department of the Gulf and commanded the left wing of Bank's army during the operations against Port Hudson; in 1864 he served in Va.; was made a brigadier-general in the regular army in 1869, and was retired in 1885.

Augur, Hezekiah.—(1791-1858.) An American sculptor and the inventor of a wood-carving machine.

Augusta.—The capital of Me., situated on the Kennebec River. It has manufactures of cotton, etc., and a U. S. arsenal. Pop. (1900), 11,683.

Augusta.—The capital of Richmond County, Ga., situated on the Savannah River. It has a large cotton trade and important manufactures, especially of cotton, and is the seat of the Medical College of Ga. It was besieged and taken by the American Revolutionary troops, in 1781. In the Civil War, it was taken by Gen. Sherman in December, 1864. Pop. (1900), 39,441.

Augusta (Ga.), Siege of, 11, 68.

Augustine, Saint (Aurelius Augustinus).—(354-430.) The greatest of the Latin Fathers. He was a voluminous writer, his works fill 11 folio volumes. His "Confessions" written in 397 give a minute sketch of his early career.

Augustine, Saint, 10, 260.

Augustus, Age of, 10, 226.

Augustus Cæsar, 10, 226.

Auk, The, 4, 213.

Great, 4, 214.

Nest of the, 4, 213.

Razor-billed, 4, 234.

Aurelian, 10, 231.

Aurelian, Emperor, 10, 401.

Aurelius, Marcus, 10, 228.

Auricles of the heart, 1, 280.

Auriga, a constellation, 5, 136.

Aurora.—A city in Kane Co., Ill., on the Fox River. It has railroad shops and manufactures of machinery, flour, etc. Pop. (1900), 24,147.

Aurora.—The Greek goddess of the dawn. 1623.

Aurora Borealis.—A northern polar light or shifting play of colors on the sky at night, seen at greatest brilliance within the Arctic circles, is supposed now to be caused by the passage of electric light through rarefied air. The similar phenomenon within South polar regions is called Aurora Australis.

Au Sable Chasm.—A deep, narrow, and picturesque chasm, formed by the Au Sable River, near Keeseville, N. Y.

Austen, Jane.—(1775-1817.) A famous English novelist. Among her works are "Sense and Sensibility," "Pride and Prejudice," "Emma," and "Persuasion."

Austerlitz.—In Moravia, between the Danube and Germany, in the north of Austro-Hungary. The battle between the French and the allied forces of Austria and Russia was fought here Dec. 2, 1805. Napoleon of France, Francis of Austria, and Alexander of Russia commanded, hence the name "the battle of the three emperors." The French gained a decisive victory over the allies who suffered fearful loss.

Austin.—The capital of Tex.; situated on the Colorado River; the seat of a state university and other institutions. It was founded by Stephen F. Austin, a pioneer (1793-1836). Pop. (1900), 22,258.

Austin, Alfred.—Born 1835; English poet-laureate; novelist, and journalist.

Austin, Jane Goodwin.—(1831-1894.) An American author.

Austin, Jonathan Loring.—(1748-1826.) An American Revolutionary patriot, who was sent to Paris (1777) with dispatches to Dr. Franklin, announcing the surrender of Gen. Burgoyne; he remained two years with Franklin as his private secretary.

Austin, Jonathan Loring, 11, 68.

Austin, Stephen Fuller, 11, 339.

Australasia.—A general name given to Australia and the large islands between the Indian Archipelago and Polynesia, including New Guinea, New Zealand, New Caledonia, New Hebrides, New Ireland, and New Britain. The total area exceeds 3,500,000 square miles, and the population is estimated at 5,500,000.

Australia.—The southwestern division of Australasia, lying wholly south of the equator, and is bounded on the east by the Pacific Ocean, on the west, northwest, and southwest by the Indian Ocean, and on the north by the Arafura Sea and Torres Strait, which separates it from New Guinea and other Pacific Islands. Tasmania lies toward the south. Australia's area is about 3,000,000 square miles and its population is about 3,750,000. The natives,

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- though lighter in color, otherwise resemble Africans. The coasts are rocky and mountainous and the interior contains large deposits of animal bones, while the general physical features suggest that at one time Australia was the bed of an ocean. Its principal products are gold and wool; its fauna and flora are peculiar to itself, and its climate is warm.
- Australia** inaugurated a commonwealth, **11**, 33.
Development of, **11**, 33.
- Australian ballot system**, **12**, 433.
- Australian Colonies**.—Comprise the colonies of New South Wales, South Australia, Victoria, Western Australia, Queensland, Tasmania, New Zealand, Fiji Islands, part of New Guinea, all of which belong to the British Empire. The climate is healthful. As they are all south of the equator, the seasons are the reverse of those in the Northern Hemisphere. The principal products are wheat, oats, maize, barley, wool, gold, copper, tin, and diamonds. In Jan. 1901, the Commonwealth of Australia was formed, federating the five colonies of the continent, including Tasmania, but excluding New Zealand. The area of the new federation is 2,972,573 sq. miles, with a population (1899) of 3,756,894.
- Australian Colonies**, The Federal, **11**, 33.
- Australian Fairy Tales**, **3**, 37.
- Austria** in Germany, Interference of, **11**, 5.
in Italy, Interference of, **11**, 1.
- Austrian Fairy Tales**, **3**, 102.
- Austrian Succession, War of**.—(1740–1748.) Charles IV., emperor of Germany, having no male heirs desired that his daughter, Maria Theresa, queen of Hungary and Bohemia, should succeed him. In 1731 he drew up the pragmatic sanction, to which England and nearly all the powers of Europe consented. France, Spain, and Sardinia opposed it. The emperor died in 1740 and Maria Theresa succeeded him. The electors of Bavaria and Saxony, the kings of Poland and Spain, Sardinia and Frederick II., of Prussia, set up claims against the throne and territory. France assisted Bavaria, and England alone supported the queen. Nearly all Europe engaged in the war that followed. The treaty of Aix-la-Chapelle (1784) confirmed the queen's succession.
- Austrian Succession, War of the**, **10**, 338.
- Austrian war in Italy**, **11**, 4.
with Prussia, **11**, 7.
- Austro-Hungary**.—A bipartite European state composed of the Cisleithan Empire of Austria and the Transleithan Kingdom of Hungary. Each country has its own parliament, but both acknowledge the same hereditary sovereign and have an army, navy, and diplomatic corps in common, as well as a controlling body known as the Delegations. This latter constitutes a parliament of 120 members, one-half representing Austria, and the other half, Hungary. The Austrian and Hungarian members usually act separately, but when unable to agree they are obliged to sit as one body. Their jurisdiction extends to foreign affairs, finance, and war. Three-fourths of Austro-Hungary, which has an area of 230,942 sq. miles, is mountainous. It has about 500 miles of seacoast on the Adriatic, and a population of about 47,000,000. All of the useful minerals are to be found, and the principal occupations are fruit culture, mining, and wine making.
- Austro-Hungary is extremely mountainous, by reason of the Alps forming its chief physical feature. The extensive forests furnish occupation to nearly one-third of the people. The chief products are grain, potatoes, beets, wine, barley, horses, sheep, cattle, and silk. Hungary ranks high among the mineral producing countries of the world. Area, 230,942 sq. miles; population, 47,015,855. Capital, Vienna (pop., 1,500,000).
- Author and Publisher**, **8**, 230.
Hints to the aspiring, **8**, 415.
- Authors**, Advice to, by W. Dean Howells, **8**, 230.
- Automobile**, **5**, 398.
records, **5**, 399.
- Auttose Towns**, Destruction of the, **11**, 215.
- Autun** (*ē-tun'*).—A city of Saone-et-Loire, of France. Has much historical interest, and is the seat of the medieval cathedral of St. Lazare, and theological seminaries. Pop. (1891), about 15,000.
- Aux Canards** (Canada), **Battle of**, **11**, 215.
- Avails**.—Profits resulting from trade.
- Avatar**, **10**, 9.
defined, **3**, 331.
- Avena sativa**, **5**, 87.
- Avens**, Yellow, **5**, 24.
- Aventine Hill**.—The largest of the seven hills, upon which Rome is built.
- Averages**, **13**, 21.
- Averell, William Woods**, **11**, 441.
- Avernus, Lake**, **14**, 309.
- Averysboro** (N. C.), **Battle of**, **11**, 441.
- Avesta** (*ā-ves' tā*).—The Bible of the Zoroasters and the Parsees.
- Avicenna** (*av-i-sen' ā*).—(980–1037.) A celebrated Arabian philosopher and physician; author of a number of medical treatises, and commentaries on the works of Aristotle. Born at Afshena, Bokhara; died at Hamadan, Persia.

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Avignon (*ä-vên-yên'*).—Capital of Vaucluse, France. A city of much historical interest; the residence of the popes 1309-76, now actively engaged in commercial interests. Pop. (1896), 45,107.

Avogadro's hypothesis, 5, 183.

law, 5, 252.

Avoirdupois, 13, 156.

weight, 13, 150.

Award, 13, 21.

Axis or second cervical vertebra, 1, 273.

Axminster carpet, 1, 33.

Ayodya, the modern Oude, 3, 322.

Ayr.—The county town of Ayrshire in Scotland, on the river Ayr. Pop., 25,000.

Ayrshire cattle, 4, 16.

Aytoun, William Edmonstoune.—(1813-1865.)

A Scottish literary writer and frequent contributor to "Blackwood's Magazine." His best known work is his "Lays of the Scottish Cavaliers."

Azalea, 5, 52.

Azof, Sea of.—An arm of the Black Sea, with which it is connected by the Strait of Yenikale. The peninsula of the Crimea shuts the sea off from the Black Sea. This was the scene of the greatest activity during the Crimean War, 1855. Known also as Azov. Area 14,000 sq. miles.

Azoic, era of the world, 5, 462.

Azores.—Islands in N. Atlantic belonging to Portugal, 1,005 sq. miles in area. Pop., 260,000.

Aztecs, or **Aztecas**.—A tribe or nation of Mexican Indians, speaking the Nahuatl tongue, and inhabiting the Anahuacan tableland of Mexico at the time of the Spanish conquest. They were a warlike people, whose dominions, in the 16th century, extended across the South American continent from the Atlantic to the Pacific. They were good cultivators of the soil, despite their warlike habits, were somewhat advanced in civilization, and had considerable knowledge of astronomy and practised astrological arts. Their religion was a gross polytheism, sacrificing human victims to their gods on a devastating scale in their mighty temples, and were especially lavish in their immolations in honor of their god Huitzilopochtli. Attached to this god's temple were no less than 5,000 priests. The Aztecs seem to have wandered into Mexico from the north, where they formed a strong confederacy, supplanting that of the Toltecs, who built the City of Mexico and dominated the petty tribes of the region and the alcorigues of Central Mexico until the coming of Cortez, in 1519, when an end was put to their power. They seem to have been without horses, oxen, or other beasts of burden, though they had some knowledge of agriculture, and an acquaintance with the metals, especially the alloy bronze, which they used largely in the fashioning of their weapons and tools.

Azurite, 5, 439.

B

Baal.—A Semitic word signifying lord, master, or, in its highest sense, the deity. It was never applied by the Hebrews to their own deity, but to indicate some god of the surrounding nations. As a prefix, in connection with some name or attribute, it was used to distinguish a particular deity, as Baal-Zebub or Baal-peor; and as Baal, Bel, or Bal, it enters largely into many proper names of persons and places. Whenever the Israelites fell into idolatry, their tendency was to worship the Baal of the people with whom they were most nearly associated.

Baal, 10, 82.

Temple of, 10, 84.

Worship of, 10, 83.

Baalbec (*Heliopolis*).—An ancient city of Syria, which was of considerable importance because of its situation in the direct line of trade between Tyre and the East. The tra-

dition that it was founded by Solomon is believed to be unfounded, and the date of its beginning is not known. It abounded in luxury and was embellished with magnificent temples all of which fell into disuse and decay, when Christianity became the religion of the Roman Empire, except the great temple, which was considered one of the wonders of the world, and which was made a Christian church. As late as the 8th century, Baalbec was still a beautiful and opulent city, and for a long time resisted the Moslem invasion, but was finally overcome in 748 and partially destroyed. It suffered during the Crusades; was afterward repeatedly sacked, and in 1759 its destruction was completed by an earthquake. Its ruins are among the most imposing in the Orient, a portion of the portico, and lofty columns, and of the walls of the great temple, being still visible.

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- Ba'ba.**—A Turkish word meaning "father," often added out of courtesy to other names as, Ali-Baba.
- Babbage, Charles.**—(1792-1871.) English mathematician and early student of the method of constructing tables of logarithms.
- Bab Ballads.**—The title of a volume of amusing verse, by W. S. Gilbert, published in 1868.
- Babbitt, Isaac.**—(1799-1862.) American metal worker. He made the first britannia-metal ware manufactured in this country. Also invented babbitt-metal, an alloy of copper, tin, and zinc, used to reduce friction.
- Babcock, Orville E.,** 11, 442.
- Babcock, Rufus.**—Born at North Colebrook, Conn., 1798; died at Salem, Mass., 1875; founder and editor of the "Baptist Memorial."
- Babel.**—The Hebrew name for Babylon or the Babylonian Empire, which signifies "to confound," in allusion to the confusion of tongues in the building of the tower of Babel. In it may also be found the probable origin of the word babble. The building of the tower of Babel is shrouded in tradition and mystery, but according to the best authorities, the time was about 2250 B. C., and the place, the plains of Shinar. Tradition confirms the scriptural account that the tower was never finished. But the spot may have been held sacred in memory; and it is believed that the temple at Borsippi, known as the citadel of Nimrod, the ruins of which still remain, was one of a series of temples erected on this site. It is probable that the temple was at first consecrated to the worship of the one God, but passed through the successive stages of idolatry until the rites performed in it were those of the lowest stages of heathenism. The Babylonians were given to the study of astronomy, and it is believed that the tower of Babel may have served a useful purpose as an observatory.
- Baboon, The,** 4, 65.
 Habits of the, 4, 65.
 Mandrill, The, 4, 65.
- Baby, The Newborn,** 2, 26.
- Baby-jumpers, Dangers of,** 2, 87.
- Babylon, Babylonia,** was the name given to the level country along the lower course of the Euphrates; the modern Irak-Arabi. It has also been called by ancient writers Shinar, Babel, "land of the Chaldees," and Chaldea. The Temple of Baal and the "hanging gardens" are among the most noteworthy points of interest. The ruins of the city have yielded tablets and sculpture which have thrown much light upon ancient history.
- Babylon, 10,** 182.
- Babylonia, History of, 10,** 182.
- Babylonian Empire, Old, 10,** 181.
- Babylonians, Home of the, 10,** 48.
- Bacchus, 10,** 100.
- Bach, Johann Christopher, 9,** 82.
- Bach, Johann Sebastian, 9, 82; 10,** 23.
 Works of, 9, 83.
- Bache, Alexander Dallas.**—Born at Philadelphia, 1806; died at Newport, R. I., 1867. An American physicist; organizer and first president of Girard College; was also superintendent of the Coast Survey (1843-67).
- Bache, Franklin.**—Born at Philadelphia, 1792; died there, 1864. An American physician and chemist. He founded, with Dr. Wood, the "United States Pharmacopœia" and edited the "Dispensatory" (1833-64).
- Bache, Richard, 11,** 68.
- Bacillus, 5,** 96.
 Comma, 5, 96.
- Back Bay, The.**—A wealthy residential quarter of Boston.
- Backgammon, 6,** 69.
- Backus, Isaac, 11,** 52.
- Backward Children, 2,** 104.
- Bacon, Delia.**—Born at Tallmadge, Ohio, 1811; died at Hartford, Conn., 1859. An American writer, sister of Leonard Bacon. She attempted to prove in "The Philosophy of the Plays of Shakespeare Unfolded," that the plays of Shakespeare were the work of Lord Bacon and others.
- Bacon, Francis, Lord Verulam, Viscount, St. Albans.**—(1561-1626.) The greatest of modern philosophers and writers on philosophy; was knighted in 1603; held several state offices before his appointment to the Lord chancellorship of England in 1619. His greatest work, the "Novum Organum" appeared in 1620.
- Bacon, Leonard.**—Born at Detroit, Mich., 1802; died at New Haven, Conn., 1881. An American clergyman, editor, and author, also one of the founders of the "New Englander" and of the New York "Independent."
- Bacon, Lord,** quoted upon the supreme duties of life, 2, 395.
- Bacon, Nathaniel, 11,** 43.
- Bacon, Roger.**—(1214-1292.) A learned English monk, who made wonderful discoveries in science and the realm of nature. Is rather doubtfully credited with the discovery of gunpowder.
- Bacon, Roger, 14,** 95, 164.
- Bacon's Rebellion, 11,** 43.
- Bacteria, 5,** 95.
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- Bacteriology, 5,** 95.

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- Bad manners, Cause of**, 2, 302.
- Badger, The American**, 4, 58.
- Badger blender paint-brush**, 4, 58.
- Badger, Habits of the**, 4, 58.
hair paint-brushes, 4, 58.
skins, 4, 58.
- Badger, Oscar C.**, 11, 442.
- Badger's Money, a Japanese Fairy Tale**, 3, 22.
- "Badger State," The**, 4, 58.
- Bad Lands.**—Certain lands of the northwestern part of the U. S., almost destitute of natural vegetation and characterized by the varied and fantastic forms into which the soft strata have been eroded. The name is also applied to the region of the Black Hills in S. D., along the White River.
- Baedeker, Karl.**—(1801-1859.) A German publisher; he originated the guidebook series now known throughout the world.
- Baffin's Bay.**—A gulf or inland sea on the northeast coast of North Amer. It extends 800 miles in its longest direction, northeast to southwest, and has an average width of 250 miles; its depth varies from 200 to 1,000 fathoms. Its coasts are rocky and precipitous, and between the cliffs innumerable sounds and bays open into it. Its waters abound in whales, seal, and walrus, and its shores in wild animals and sea fowl. It is connected with the Atlantic by Davis Strait, and with the Arctic by Smith and Lancaster sounds. The first voyage was made from Bering Strait to Baffin's Bay about 1852.
- Bagby, Arthur Pendleton**, 11, 339.
- Bagby, George William.**—Born in Va., 1828; died at Richmond, Va., 1883. A physician, journalist, and humorist, who wrote under the pseudonym "Mozis Addums."
- Bagdad.**—A city of Asiatic Turkey, built upon both sides of the river Tiber, the two divisions connected by bridges of boats. It is inhabited by Jews, native Christians, Arabs, Persians, and Turks, and is well fortified. The city as viewed from a distance is beautiful, the groves of palms and orange trees forming an agreeable contrast with the domes and minarets. It was built by caliph Al Mansur in 762-66, and a century later was said to have a population of 2,000,000. It is in a region prolific with oriental grains and fruits, and, besides these, it exports horses, pearls, coral, honey, raw silk, bitumen, saltpeter, etc. It imports manufactured cloths, coffee, and drugs, but it has declined from its early commercial importance. It was conquered several times by the Turks and Persians alternately, and finally by the Turks in 1638.
- Baggage, Examination of**, 13, 247.
- Bahama Islands.**—Formerly Lucayos. They number about 3,000, all very small except 30, and the chain stretches from a point near the north coast of Haiti to the east coast of Fla. The main islands are the Great Bahama, the Abacos, Eleuthera, New Providence, Andros, Guanahani or Cat Island or San Salvador, Watling, Exuma, Long Island, Crooked Islands, Mariguana, Inagua, Little Inagua, and Turks Island. The climate of the Bahamas is extremely mild and healthful in all seasons. They produce cotton, maize, and many tropical fruits. They were the first land seen by Columbus in 1492, were occupied by the English in 1629, and further secured to them by treaty in 1783. The capital is Nassau, New Providence. Area, 5,794 sq. miles; pop. (1901), 53,725.
- Bahia, or San Salvador.**—Capital of Bahia province in Brazil, on Bay of All Saints, pop., 200,000.
- Baikal.**—A fresh-water lake in South Siberia. It ranks third among the lakes of Asia, being 370 m. long and from 20 to 70 miles wide, and its depth is very great.
- Bailey, Edward Hodges**, 9, 409.
- Bailey, James Montgomery.**—Born in Albany, N. Y., 1841; died at Danbury, Conn., 1894. An American humorist, and editor of the "Danbury News." He was widely known as the "Danbury Newsman."
- Bailey, Joseph**, 11, 442.
- Bailey, Theodorus**, 11, 442.
- Baillie, Joanna.**—(1762-1851.) An eminent modern Scottish poetess.
- Bain, Alexander.**—(1818-) A Scottish writer on mental philosophy and psychology.
- Bainbridge, William**, 11, 215.
- Bairam**, 13, 103.
- Baird, Charles Washington.**—Born at Princeton, N. J., 1828. A Presbyterian clergyman and author of a "History of the Huguenot Emigration to America" (1885).
- Baird, Henry Martyn.**—Born at Philadelphia, 1832. Professor of Greek in the University of the City of New York, and author of a "History of the Rise of the Huguenots" (1879).
- Baird, Robert.**—Born in Fayette Co., Pa., 1798; died at Yonkers, N. Y., 1863. An American clergyman and historical writer. His chief works are, "A View of Religion in America," "History of the Temperance Societies," and a "History of the Albigenses, Waldenses, and Vaudois."
- Baird, Spencer Fullerton.**—Born at Reading, Pa., 1823; died at Wood's Holl, Mass., 1887. A noted American naturalist. Among his numerous works (over 1,000 titles) are a "Cat-

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- alogue of North American Reptiles," "Mammals of North America," and a history of "North American Birds."
- Bajazet**, 10, 287.
- Baker, Edward Dickinson**, 11, 442.
- Baker, George Augustus**.—Born in New York City, 1821; died there, 1880. A noted American portrait-painter.
- Baker, Lafayette**, 11, 442.
- Baker, Mount**.—A volcanic peak in the Cascade Mountains, in northern Washington, near the Canadian frontier, 11,000 feet high.
- Baker, Dr. Smith**, quoted on signs of fatigue in children, 2, 102.
- Baker, William Mumford**.—Born at Washington, D. C., 1825; died at Boston, Mass., 1883. A Presbyterian clergyman and novelist. His chief works are, "Inside; a Chronicle of Secession," "Oak-Mot," "His Majesty, Myself." He sometimes used the pseudonym George F. Harrington.
- Baker's Creek (Miss.)**, **Battle of**, 11, 443.
- Baking** as a business and as a trade, by Wilbur E. Cushman, 13, 391.
- Baking Powder**, 5, 242.
- Bala Rama**, 10, 12.
- Balaklava**.—A small seaport in the Crimea, opposite Sebastopol. It was here that those memorable cavalry charges were made in 1854 (Oct. 25). Pop., 1,000.
- Balance**, 13, 21.
 Account, 13, 21.
 of power, 10, 361.
 of trade, 13, 21.
 sheet, 13, 21.
 Trial, 13, 47.
- Balbóa de Vasco Nuñez**.—(1475-1517.) A Spanish conqueror, who is regarded as the discoverer of the Pacific Ocean. He caught the first sight of it on Sept. 25, 1513.
- Balbóa, Adventures of**, 11, 37.
- Bald Eagle**, 4, 133.
- Bald Mountain**.—A peak in the Front Range, Col., 12,500 feet high.
- Balder, Death of**, 10, 122.
- Baldwin I**.—(1058-1118.) King of Jerusalem. Son of Godfrey de Bouillon, was made protector of the Holy Sepulcher at Jerusalem and was proclaimed king. He reigned 18 years.
- Baldwin, Count of Flanders**, 10, 258.
- Baldwin, H. P.**, 14, 95.
- Baldwin, Matthias William**.—Born at Elizabethtown, N. J. 1795; died at Philadelphia, 1866. An American inventor, noted as an improver and manufacturer of locomotive engines.
- Baldy Peak**.—A peak 12,660 ft. high, northeast of Santa Fé, N. Mex.
- Bale**, 13, 21.
- Balearic Islands**.—A group of 5 islands in the Mediterranean Sea, off the coast of Valencia. They are called Majorca, Minorca, Iviza, Formentera, and Cabrera. They form a Spanish province, pop., 313,000.
- Bales, Peter**, 14, 211.
- Balestier, Charles Wolcott**.—Born at Rochester, N. Y., 1861; died at Dresden, Germany, 1891. American journalist, novelist, and publisher. He was the author of "A Patent Philtre," "The Naulahka" (in collaboration with Rudyard Kipling), "Benefits Forgot," etc.
- Balfe, Michael William**.—(1808-1870.) Composer of a number of operas; also a violinist and a singer.
- Balkans**.—A range of mountains in S. E. Europe, dividing Bulgaria from Eastern Rumelia. The highest point is 8,340 feet above sea-level.
- Ball, Ephraim**.—Born at Greentown, Ohio, 1812; died at Canton, Ohio, 1872. An American inventor and manufacturer of plows, mowers, and harvesters.
- Ball, Thomas**.—Born at Charlestown, Mass., 1819. An American sculptor. Among his best works, are a statue of Webster, the "Emancipation" statue, and busts of Everett, Choate, and others.
- Ball, Thomas**, 9, 412.
- Ballo in Maschero** (*bäl'lo ĩn mäs'ke-rä*), **Un** (A MASKED BALL).—Opera by Verdi, 1859.
- Balloon as a Plaything**, 2, 127.
- Balloons and Ballooning**, 5, 399.
- Ballot**, 12, 197.
- Ballot System, Australian**, 12, 433.
- Ballou, Hosea**.—Born at Richmond, N. H., 1771; died at Boston, Mass., 1852. One of the founders of Universalism in America.
- Ball's Bluff (Va.)**, **Battle of**, 11, 443.
- Balm of Gilead**, 4, 429.
- Balm of the warrior's wound**, 5, 17.
- Balsamifera candicans**, 4, 429.
- Baltimore**.—The sixth city in the U. S. It is the chief city of Md. on the N. bank of the Patapsco River, 14 miles from its entrance into Chesapeake Bay. Pop. (1900), 508,957.
- Baltimore, The**.—A U. S. armored cruiser, which participated in the battle of Manila, May 1, 1898.
- Baltimore, Attack on Union Volunteers**, 11, 443.
- Baltimore, Lord**, 11, 48.
- Baltimore oriole**, 4, 162.
- Bal'zac de Honoré**.—(1799-1850.) One of the best of modern French novelists.
- Baltac**, 14, 5.

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- Bambino plaques**, 1, 217.
Bamboo, 4, 483.
Banana, 4, 479.
Bancroft, Aaron, 11, 215.
Bancroft, George, Life and Works of, 8, 279.
Bancroft, Hubert Howe.—Born at Granville, Ohio, May 5, 1832. An American historian. Having established an extensive book business in San Francisco, he began to collect books and documents relating to the Pacific states, upon which after acquiring a large number of manuscripts and tracts, he founded his "History of the Pacific States," part of which relating to the Indian tribes, Central America, and Mexico, are completed (1906); the remainder is in course of preparation.
Banded Peak.—A summit in Colo., 12,860 feet high.
Baneberry, Red, 5, 22.
 White, 5, 22.
Bangkok.—The capital city of Siam, at the head of the Gulf of Siam, on the Menam River. Pop., 250,000.
Bangor.—City and cap. of Penobscot Co., Me.; on the Kenduskeag River. Pop. (1900), 21,850.
Bank account, Directions for keeping, 7, 467.
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 system, Free, 11, 373; 13, 117.
Bankrupt, 13, 36.
Bankruptcy has a dual meaning; it is a state of inability to pay all debts, and the word also designates the process by which an individual or a corporation may obtain a discharge of his or its indebtedness, by surrendering his or its property and otherwise complying with the law. A bankruptcy law enacted by Congress in 1800 was repealed in 1803. In 1837 a commercial crisis in this country resulted in failures to the extent of about \$100,000,000. In consequence of the panic that ensued, Congress passed another bankruptcy act in 1841, but repealed it in 1843. Most of the banks suspended specie payment in 1857, during the financial panic. The Lowell act, passed in 1867, was in force until 1878. The existing law dates from 1898. During the intervals when there was no national bankruptcy law, all matters pertaining to insolvencies were under the control of the states.
Bankruptcy, 13, 36.
Bankruptcy law, 13, 36.
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Banks, Nathaniel Prentiss, 11, 444.
Banks, National, 7, 469.
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 Uses of, 7, 454.
Bannockburn.—A small village 3 miles from Stirling in Scotland. Near here Bruce with 30,000 men gained a decisive victory (June 24, 1314) over Edward II. who had 100,000 men. (See BRUCE, ROBERT THE.) Pop., 2,258.
Bannockburn, Battle of, 10, 264.
Bannocks.—A tribe of North American Indians; also called "Robber Indians."
Bantam fowl, 4, 107.
Banyan tree, 4, 467.
Baptist church founded in America, 11, 45.
Barbados, or Barbadoes, Island.—One of the British West Indies, near the Windward group. It produces rum, sugar, and molasses, and is ruled by a governor, executive committee, legislative council, and house of assembly. Colonized about 1625, it now (1906) has a population of 195,000; area, 166 sq. miles.

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- Barbary States.**—The northern section of Africa, bordering on the Mediterranean Sea. In ancient times, the soil, which is rich, yielded abundant crops. It then included what were known as Mauritania, Numidia, Africa Propria, and Cyrenaica. It now embraces Barca, Tripoli, Tunis, Algeria, and Morocco. Exclusive of Europeans, seven races—Berbers, Moors, Bedouins, Jews, Turks, Kabyles, and Negroes—inhabit the Barbary States. The commercial language is Arabic, except in Tunis and Tripoli, where the Turkish language and government prevail.
- Barbe-Bleue** (BLUE-BEARD).—1. Comedy by Sedaine, 1789. 2. An opera bouffe by Meilhac, Halévy, and Offenbach, 1866.
- Barber, Francis**, 11, 68.
- Barber, John Warner.**—Born at Windsor, Conn., 1798; died, 1885. An American historical writer; author of "History and Antiquities of New England, New York, and New Jersey" (1841), etc.
- Barbet**, a French poodle dog, 4, 21.
- Barbier de Séville** (*bär-bē-ā' dē sā-vēl'*), **Le** (BARBER OF SEVILLE).—1. Comedy by Beaumarchais, 1772. 2. An opera bouffe by Paisiello, 1780.
- Barbison**, or **Barbazon.**—A village near Fontainebleau, about 40 miles from Paris. It is the resort of the modern French School of landscape painters.
- Barbour, James**, 11, 339.
- Barbuda.**—An island in the British Caribbees (Leeward group), 30 miles N. of Antigua.
- Barcelona.**—The most important manufacturing town in Spain, is situated in N. E. of Spain on the Mediterranean Sea, south of the Pyrenees Mountains. Pop. (1897), 509,589.
- Bard, Samuel**, 11, 52.
- Bard, Samuel.**—Born at Philadelphia, 1742, died at Hyde Park, N. Y., 1821. An American physician and medical writer; president of the College of Physicians and Surgeons at New York (1813-21).
- Bareilly, Defeat of Sepoys at**, 11, 16.
- Bargiel** (*bär-gēl'*) **Woldemar.**—Distinguished German composer and instructor of music. Born at Berlin, 1828; died, 1897.
- Barham, Richard Harris.**—An English clergyman and poet; author of the "Ingoldsby Legends." Born, 1788; died, 1845.
- Bar Harbor.**—A noted summer resort on the island of Mount Desert, Me.
- Baring-Gould, Sabine.**—English clergyman and author. Born, 1834.
- Baring, Sir Evelyn**, organizes financial system of Egypt, 11, 18.
- Barker, Jacob**, 11, 68; 14, 289.
- Barker, James Nelson**, 11, 339.
- Barkis.**—The carrier in Dickens's "David Copperfield" who signifies his desire to marry Peggotty by sending to her, through little David, the message "Barkis is willin'."
- Barksdale, William.**—Born in Tenn., 1821; killed at Gettysburg, Pa., July 2, 1863. A southern politician and Confederate general in the Civil War. He was a member of Congress from Mississippi before the war (1853-61), and was most strenuous in the defense of slavery and the advocacy of state rights. His wig was once pulled from his head during an altercation on the floor of the House, growing out of a debate on slavery. He was killed while leading his men in an assault on the Federal line at the Peach Orchard, during the fierce fighting of the second day at Gettysburg.
- Barley**, 5, 83.
- Barlow, Francis Channing.**—Born in N. Y., 1834; died 1896. A lawyer and a prominent soldier of the Civil War. He entered the Union army as colonel of the 61st N. Y. Volunteers and rose to the rank of maj.-gen.; served in the Army of the Potomac and participated in nearly all the battles of its campaigns. He was desperately wounded at Gettysburg and his life was despaired of; but he recovered and led a division in Grant's campaign of 1864-65.
- Barlow, Joel**, 11, 68.
- Barmecides** (*bär'mē-sīdz*).—A noted Persian family founded by one Barmek, who attained power in the service of the calif Abd-ul-Malik.
- Barmecide's Feast.**—A feast at which everything was imaginary—empty dishes being set upon the table, originated in one of the stories of the "Arabian Nights' Entertainments."
- Barn Owl**, 4, 144.
- Barn Swallow**, 4, 191.
- Barnacles**, 4, 365.
- Barnard College.**—An institution for the higher education of women, founded in New York City in 1889.
- Barnard, Daniel Dewey**, 11, 339.
- Barnard, Edward Emerson.**—Born at Nashville, Tenn., 1857. An American astronomer. He made a number of scientific discoveries, the most notable of which was that of the fifth satellite of Jupiter, made at the Lick Observatory, in Cal., Sept. 9, 1892.
- Barnard, Professor Edward Emerson**, 8, 69.
- Barnard, Frederick Augustus Porter.**—Born at Sheffield, Mass., 1809; died at New York, 1889. An American educator, scientist, and author. He was president of the University of Mississippi (1856-61), and of Columbia College (1864-89); was U. S. commissioner at

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- the Paris Exposition of 1867, and assistant commissioner-general at the exposition of 1878.
- Barnard, George Gray**, 9, 413, 414.
- Barnard, How students pay their way at**, 8, 50.
- Barnard, John**, 11, 449.
- Barnard, John Gross**, 11, 449.
- Barnby, Sir Joseph**.—English organist composer and conductor. Born, 1838; died, 1896.
- Barnegat Bay**.—East of New Jersey; connects with the Atlantic Ocean through Barnegat Inlet.
- Barnes, Albert**.—Born at Rome, N. Y., 1798; died at Philadelphia, 1870. A noted Presbyterian divine and biblical commentator. He is best known by his "Notes" on the New Testament, Job, Psalms, Isaiah, etc. He was tried for heresy and acquitted.
- Barnet, Battle of**, 10, 274.
- Barney, Joshua**, 11, 69.
- Barnstable**.—A seaport of Massachusetts, on Cape Cod Bay. Fishing interests and coast trade. Pop. (1900), 4,364.
- Barnum, Phineas Taylor**.—Born at Bethel, Conn., 1810; died at Bridgeport, Conn., 1891. A famous American showman; was proprietor of Barnum's Museum in New York City started in 1841; managed Jenny Lind's concert tour through America (1850-51); established his menagerie and circus in 1871. He was a member of the Conn. legislature (1865-69) and was elected mayor of Bridgeport (1875). He wrote "The Humbugs of the World," "Struggles and Triumphs, or Forty Years' Recollections" (1869), etc.
- Barnum, P. T.**, 14, 95.
- Barometer**, for measuring heights, 13, 166.
- Barometer** (*Gr.*, *baros* "weight," and *metron*, "a measure").—An instrument for measuring the weight of the atmosphere. See AIR.
- Baron, Michel**.—A celebrated French actor and playwright. Born, 1653; died, 1729.
- Barr, Mrs.** (AMELIA EDITH HUDDLESTON).—Novelist; born at Ulverston, Lancashire, Eng., 1831.
- Barr, Mrs. Amelia E.**, 1, 268.
Advice to young authors by, 8, 232.
- Barras**, 14, 119.
- Barratry**, 13, 37.
- Barred owl**, 4, 144.
- Barrel, Size of a**, 13, 149.
- Barrett, Lawrence**, 11, 449.
- Barrett, Wilson**.—An English actor; born, 1846.
- Barrias, Louis Ernest**, 9, 402.
- Barricades, Days of the**.—Applied in French history, to several insurrectionary wars in Paris, chiefly to those of 1830 and 1848.
- Barrie, James Matthew**.—A Scottish writer and journalist. Author of several popular novels and a number of shorter works. Born at Kirriemuir, Forfarshire, 1860.
- Barron, Samuel**.—Born in Va. about 1763; died, 1810. An American commodore who commanded a squadron in the Tripolitan War in 1805.
- Barrow, Frances Elizabeth Mease**.—Born at Charleston, S. C., 1822. An American writer, principally of juvenile books, the best known of which are "Little Pet Book," "Good Little Hearts," "Nightcap Series," "The Pop-Gun Stories," and the "Six Mitten Books." She wrote under the pseudonym of "Aunt Fanny."
- Barrow, Isaac**, 14, 13.
- Barrow, James**, 11, 215.
- Barry, Sir Charles**.—(1795-1860.) An English architect; the designer of the Houses of Parliament, London.
- Barry, Countesse du**.—(1746-1793.) Mistress of Louis XV. Guillotined at Paris.
- Barry, James**, 9, 281.
- Barry, John**, 11, 69.
- Barry, John Stetson**.—Born at Boston, Mass., 1819; died at St. Louis, Mo., 1872. An American Universalist clergyman and historical writer. He wrote a "History of Massachusetts" (1855-1857.)
- Barry, Patrick**.—Born in Ireland, 1819; died at Rochester, N. Y., 1890. An American horticulturist and pomologist; was editor of the "Genesee Farmer"; wrote "A Treatise on the Fruit Garden," and prepared the catalogue of the American Pomological Society (1851), etc.
- Barry, William Farquhar**, 11, 449.
- Barry, William Taylor**.—Born at Lunenburg, Va., 1785; died at Liverpool, Eng., 1835. An American politician and jurist; was postmaster-general (1829-33) and the first incumbent of that office after it was raised to a cabinet position; was appointed minister to Spain in 1835.
- Barstow, Elizabeth**, wife of Richard Henry Stoddard, 1, 233.
- Barstow, Ella L.**, wife of Thos. C. Platt, 1, 234.
- Barter**.—To trade or exchange goods without the intervention or use of money in the transaction.
- Bartholome**, 9, 402.
- Bartholomew Fair**, 13, 92.
- Bartlett, John**.—Born at Plymouth, Mass., 1820. An American book publisher and editor. He compiled a collection of "Familiar Quotations"; also a "Concordance to Shakespeare" (1894).

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- Bartlett, John Russell.**—Born at Providence, R. I., 1805; died there, 1886. An American antiquarian and historian. He was a commissioner to establish the boundary line between the U. S. and Mexico (1850); and was secretary of state for R. I. (1855-72). He wrote "Dictionary of Americanisms," "Bibliography of Rhode Island," "Primeval Man," etc.
- Bartlett, Joseph.**—Born at Plymouth, Mass., 1762; died at Boston, 1827. A satirical poet, author of "Physiognomy," which was recited before the Harvard Phi Beta Kappa Society in 1799. His life was that of an adventurer.
- Bartlett, Josiah, 11, 69.**
- Bartlett, Samuel Colcord.**—Born, 1817; died, 1898. An American educator and Congregational clergyman. He became president of Dartmouth College (1877) and wrote "From Egypt to Palestine" (1879), etc.
- Bartolini, Lorenzo, 9, 399.**
- Barton, Benjamin Smith, 11, 215.**
- Barton, Clara, 8, 213.**
- Barton, William, 11, 69.**
- Barton, William Paul Crillon.**—Born at Philadelphia, 1786; died there, 1856. An American botanist. He wrote "Flora of North America," "Lectures on Materia Medica and Botany," "Medical Botany," etc.
- Bartram, John, 11, 53.**
- Bartram, William, 11, 53.**
- Bartramian sandpiper, 4, 129.**
- Barye, Antoine Louis, 9, 401.**
- Bascom, Henry Bidleman.**—Born at Hancock, N. Y., 1796; died at Louisville, Ky., 1850. An American bishop (1850) of the Methodist Episcopal Church (South), and President of Transylvania University, Ky. (1842-50).
- Bascom, John.**—Born at Genoa, N. Y., 1827. An American educator and philosophical writer. He was president of the University of Wisconsin (1874-87) and wrote "Political Economy," "Principles of Psychology," "Natural Theology," "Problems in Philosophy," etc.
- Baseball, 6, 174.**
 Definitions of terms in, 6, 195.
 Players, Duties of the, 6, 177.
 Technical terms in, 6, 179.
- Bases chemically defined, 5, 172.**
- Bashi-Bazouk.**—In the Turkish army, volunteer enlistment; those who serve without pay or uniform, expecting in return only their maintenance.
- Bashkirtseff, Maria Constantinovna.**—(1860-1884.) A young Russian painter.
- Basicity of acids, 5, 191.**
- Basil, 5, 52.**
- Basilisk, The, 4, 252.**
 Geographical distribution of, 4, 252.
- Basket, Baby's, 2, 32.**
- Basket-Ball, Educational value of, 6, 18.**
 Rules for playing, 6, 59.
- Basket Stars, 4, 309.**
 Characteristics of, 4, 309.
 Habits of, 4, 309.
- Basle, 14, 110.**
- Basque.**—Provinces in N. W. of Spain. The origin of the peculiar inhabitants of this area presents great difficulties to ethnologists and linguists.
- Bass, 4, 296.**
 Black, 4, 298.
 Food of the, 4, 298.
 Reproduction of the, 4, 298.
- Bass-Fishing, 4, 296.**
- Bass, Green, 4, 298.**
 Rock, 4, 298.
 Sea, 4, 296.
 Characteristics of the, 4, 297.
 Fishing for, 4, 297.
 Habits of the, 4, 297.
 Home of the, 4, 297.
 Spawning of the, 4, 297.
 Spotted, 4, 298.
 Striped, 4, 296.
 Characteristics of the, 4, 296.
 Flesh of the, 4, 297.
 Food of the, 4, 297.
 Home of the, 4, 296.
 Striped Lake, 4, 297.
 Yellow, 4, 297.
 White, 4, 297.
 Home of the, 4, 297.
- Bassanio.**—A character in Shakespeare's "Merchant of Venice."
- Basse Terre.**—Capital of the island of Guadeloupe, in the French West Indies, pop., 8,800.
- Basswood, 4, 423.**
 White, 4, 424.
- Bast, Uses of, 4, 425.**
- Bastien-Lepage** (*bäs-tyan'le-päzh*), **Jules.**—(1848-1884.) A distinguished French painter.
- Bastile Destroyed, 10, 343.**
- Bastille.**—A famous state prison at Paris; the scene of many tragedies, especially during the ministry of Richelieu. Founded 1370; razed 1790.
- Basutoland.**—In South Africa, a colony of natives (Basutos) under the direct control of the British government. Area, 10,293 sq. m. Pop. (1891), about 250,000.
- Bat, The, 4, 61.**
 Eyes of the, 4, 62.
 Food of the, 4, 62.

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Bat, The—Continued.

- Fur of the, 4, 62.
- Habits of the, 4, 62.
- Parrot, 4, 209.
- Philippine Islands, 4, 63.
- Sleeping habits of the, 4, 62.
- Wings of the, 4, 62.

Bat Zabbai, Queen, 10, 400.

Batavia.—Seaport and capital of the Dutch East Indies. Pop. (1897), 115,567.

Batavia.—A town in New York. Pop. (census of 1900), 9,180.

Batchelder, Frank Roe, on Birds, 4, 95.

Batchellor, Professor Daniel, on the Star-clock, 5, 133.

Bate, William B., 11, 449.

Bates, Arlo.—Born at East Machias, Me., Dec. 16, 1850. An American author and journalist. He became editor of the "Boston Sunday Courier" in 1880 and is author of "The Pagans."

Bates, Charlotte Fiske.—Born in New York City, 1838. An American poet. She assisted Longfellow in compiling his "Poems of Places"; edited the "Cambridge Book of Poetry and Song," and is the author of "Risk and Other Poems."

Bates College.—A coeducational institution of learning at Lewiston, Maine; controlled by the Freewill Baptists. It was chartered as a college in 1864 and named after one of its chief patrons, Benjamin E. Bates, of Boston, Mass.

Bates, David.—Born about 1810; died at Philadelphia, Pa., 1870. An American writer; author of the familiar poem "Speak Gently." His poems were published under the title of "The Eolian."

Bates, Joshua.—Born at Weymouth, Mass., 1788; died at London, England, 1864. A banker of the firm of Baring Brothers and Co., and chief founder of the Boston Library (1852-58).

Bath.—A town in Somersetshire, Eng. Pop. (1901), 51,843.

Bath.—A town and port of entry in Maine. Pop. (1900), 10,477.

Bath, The, 6, 11.

- Cold, 6, 12.
- Daily, 2, 445.
- for girls and boys, 2, 445.
- Proper time for, 6, 12.
- Skin, The, 6, 12.
- Turkish, 6, 12.
- Warm, 6, 12.

Bathing Children, 1, 297.

- Danger of prolonged, 1, 298.
- Necessity for, 6, 12.

Bathroom, Care of the, 1, 20.

- Decoration of the, 1, 20.
- Floor of the, 1, 20.
- supplies, 1, 21.

Baths and Bathing, 1, 297.

- Cold, 1, 298.
- for infants, 1, 297.

Baton Rouge.—The capital of La., on the Mississippi River, 75 miles above New Orleans. It was captured from the Confederates by the Federals in May, 1862. In Aug. of the same year Gen. John C. Breckinridge with a strong Confederate force attempted to retake it. He made a furious assault, but was repulsed with heavy loss. The Union commander, Gen. Thomas Williams was killed. The name, Baton Rouge, signifies "red staff"—so named from a red boundary mark which separated the lands of the Indians from those of the whites. Pop. (1900), 11,269.

Batoum a free port, 11, 12.

Battenberg.—In the province of Hesse-Nassau, Prussia, a small town, from which is derived the name of the Battenberg family.

Battersea.—In London, a suburb on the south side of the Thames.

Battersea Park.—One of London's parks, situated on the Thames.

Battery, The.—A name applied to the lowermost point of Manhattan Island, on which stands the city of New York—or, to be more exact, Manhattan borough of "Greater New York." The Battery is so named from an old Dutch fort which stood on the point of the island in the early days. Battery Park, a beautiful reservation, covers about 20 acres.

Batley, Robert.—Born at Augusta, Ga., 1828; died at Rome, Ga., 1895. An American physician and surgeon, editor of the "Atlanta Medical and Surgical Journal." In 1872 he performed what is known as Batley's operation for the removal of the ovaries.

Battle above the Clouds.—The battle of Lookout Mountain, near Chattanooga, fought in Nov., 1863. During the engagement at the summit, low-hanging clouds enveloped the combatants and hid the battle from the view of those on the plain below—hence the popular name.

Battle Hill, 11, 69.

Battle Hymn of the Republic, History of the, 8, 289.

Battle Monument, 11, 215.

Battle of the Spurs, 10, 300.

Battles of the World, Five Decisive.—First, Arbela (or more properly Gaugamela, a little to the northwest of Arbela, a town in Assyria), where was fought the battle which led to the

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final overthrow of the Persian empire. Here in 331 B. C., the Macedonians (47,000 in number) under Alexander the Great defeated the Persian army (about a million strong) under King Darius III. (Codomannus).

Second, Marathon, the scene of the great defeat of the Persian hordes of Darius I. by the Greeks under Miltiades, in 490 B. C., stands on a plain in ancient Attica, 18 miles N. E. of Athens. The Greeks in the battle had only 11,000 men, while the Persians had 100,000; the Greek loss was but 200, that of the Persians 6,500. The victory balked Darius's designs against Greece, and forced the Persian army to retreat to Asia.

Third, Châons, or Troyes, in France, was in 451 A. D., the scene of a great battle, in which Aetius, the Roman general, assisted by the Visigoths under their King Theodoric, defeated Atilla and his Huns. The encounter is said to have been one of the most desperate in history, its effect being to check Atilla and cause him to retire into Pannonia (now Hungary).

Fourth, Saratoga (2d battle of), fought Oct. 7, 1777, near the Hudson, 12 miles E. of Saratoga Springs, N. Y., during the Revolutionary War. The Americans under Gates, held a strong position at Bemis Heights and this the English General Burgoyne sought to take by storm, and so cut in twain the American military line. The battle was followed (Oct. 17) by the surrender of Burgoyne and his army (6,000 men) to the Americans. Both British and Americans lost a fourth of their number.

Fifth, Waterloo, a decisive victory gained near Waterloo (a village south of Brussels), June 18, 1815, by the allied British, Dutch, and Germans over Napoleon and his French army. The allies (about 67,000 strong) were under the Duke of Wellington, aided by about 50,000 Prussians under Blücher. The French numbered 72,100, losing half of their army, besides prisoners. The loss of the allies was over 21,000. Waterloo brought about the deposition of Napoleon and his exile to St. Helena.

Baucis.—A heroine of Greek legend.

Baudelaire (*bōd-lār'*), **Pierre Charles.**—(1821-1867.) A French poet and critic.

Baudry (*bō-drè'*), **Paul Jacques Aimé.**—(1828-1886.) A French painter of portraits—historical and decorative subjects.

Bavaria.—A kingdom, the second in area and population of the states that form the German empire. It is composed of two parts, unequal and disconnected, the eastern the larger, and the western the smaller. Cereals, tobacco, potatoes, hops, flax, and wine are the principal

products. It is a monarchy with an upper house and a chamber of deputies. It entered the German empire in 1871. Area, 29,286 sq. miles; pop. (1900), 6,175,153.

Baxter, Richard.—(1615-1691.) A noted non-conformist divine of England, the author of a number of religious works, of which the best known is "The Saints' Everlasting Rest."

Bay, American, 4, 441.

Bay berry tree, 4, 484.

Bay-breasted warbler, 4, 186.

Bay tree, 4, 484.

Bayard, Chevelier de (PIERRE DU TERRAIL).—(1475 (?) - 1524.) A French hero, distinguished in the Italian campaigns. He is termed "The Knight without fear and without reproach."

Bayard, James Ashton, 11, 216.

Bayard, Thomas Francis, 12, 198.

Bay duck, 4, 110.

Bayeux Tapestry.—A famous piece of embroidery in the Library at Bayeux, France. The embroidery representing scenes from the Norman Conquest—of England—is done upon a strip of linen 231 ft. long and 20 inches wide. It is supposed to be the work of Matilda, wife of William the Conqueror.

Bayles, James C., on "Conditions of Success in Manufacturing," 13, 285.

Bayley, James Roosevelt.—Born in New York City, 1814; died at Newark, N. J., 1877. An American Roman Catholic prelate. He was the first bishop of Newark (1853) and archbishop of Baltimore (1872-77), author of a "History of the Catholic Church in New York" (1853), etc.

Baylies, Francis.—Born at Taunton, Mass., 1733; died there, 1852. An American politician who wrote a "Memoir of the Colony of New Plymouth."

Baylor, Frances Courtenay (MRS. GEORGE SHERMAN BARNUM).—An American novelist and short story writer. Born in Arkansas in 1848.

Bayly, Ada Ellen (*pseudonym* EDNA LYALL).—English novelist; author of several popular books.

Bay of Biscay.—An arm of the Atlantic Ocean lying west of France and north of Spain. It is subject to remarkably severe storms.

Bayonne.—1. A seaport and fortress of France. Pop. (1891), 27,192. 2. A city and port of New Jersey. Pop. (1900), 32,722.

Bay Psalm Book, 11, 53.

Bay Psalm Book, The.—The first New England version of the Psalms. Published by Richard Mather, John Eliot, and Thos. Welde in 1640. There are but eight copies known to be extant.

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- Bayreuth** (*bî'roit*), or **Baireuth**.—The capital of the province of Upper Franconia, Bavaria. It is noted for its musical interests, especially for its Wagnerian festivals. Pop. (1895), 27,693.
- Bazaine, Francois Achille**.—(1811-1888.) A French marshal. Passed with credit and promotion through the several foreign campaigns in Algeria, Spain, the Crimea, Italy, and Mexico. He gained the Cross of the Legion of Honor, rose to be its commander, won the Grand Cross. He took an active part in the war against Germany; became commander of the French forces; was besieged at Metz when he capitulated, was charged with neglect of duty and sentenced to degradation and death. The sentence was commuted to 20 yrs' imprisonment, but after one year at the Isle St. Marguerite he escaped to Madrid in 1874, where he died in 1888.
- Beach-pea**, 5, 64.
- Beacon Hill**.—An elevation north of Boston Common, named from the beacon fires which were formerly lighted upon it.
- Beaconsfield, Lord**, 14, 5, 270; 11, 17.
- Bead-stringing for children**, 2, 424.
- Beagle**, 4, 20.
- Bean**, 5, 64.
- Bear**.—A term used, in Stock Exchange, to designate a man who has agreed to deliver more stock than he possesses.
- Bear, The**, 4, 34.
Black, 4, 35.
- Bear, Great**, 5, 135.
Grizzly, 4, 34.
Habits of the, 4, 35.
Little, 5, 137.
Polar, 4, 35.
- Bear Flag War**, 11, 340.
- Bear Lake**.—Situated on the border between Utah and Idaho. About 20 miles in length.
- Bear Mountain**.—A high hill in the northeastern part of Dauphin Co., Pa., with large coal deposits in its vicinity.
- Bear River**.—In northern Utah and southern, a river about 400 miles long which flows into Great Salt Lake.
- Beard, George Miller**.—Born at Montville, 1839; died, New York City, 1883. An American physician, author of "Stimulants and Narcotics," "Eating and Drinking," "Hay Fever," etc.
- Beard, William Holbrook**.—Born, 1825; died, 1900. An American painter, chiefly of humorous pictures; was well known as a caricaturist.
- Beardsley, Eben Edwards**.—Born at Stepney, Conn., 1807; died, New Haven, Conn., 1891. An American Protestant Episcopal clergyman and historical writer, author of "History of the Episcopal Church in Connecticut" (1865).
- Beardsley, Samuel**, 11, 340.
- Bear's claws**, 4, 35.
- Bears, Story of the Three**, an English Fairy Tale, 3, 124.
- Beatrice Cenci** (*bā-ä-trē'-che chen' che*).—Guido Reni's celebrated portrait in the Barberini Palace, Rome. See CENCI, BEATRICE.
- Beattie** (*bē'ti*) **James**.—(1735-1803.) Scotch poet, essayist, and philosophical writer.
- Beatty, John**, 11, 449.
- Beau Brummel**.—A play by William Blanchard Jerrold, produced in London 1859. 2. A successful play brought out in New York, 1891, by Richard Mansfield.
- Beaufort**.—A seaport and watering-place, the capital of Beaufort Co., S. C.; has a good harbor; was captured by the Federals in 1861, early in the Civil War. Pop. (1900), 4,110.
- Beauharnais, Vicomte de**, 11, 69.
Alexandre, 10, 422.
Josephine, 10, 422.
- Baumarchais** (*bō-mär-shā'*), **Pierre Augustin Caron de**.—(1732-1799.) French writer and dramatist. Among his noted works are "Le Barbier de Séville," "Le Mariage de Figaro," and four volumes of "Memoirs," the latter written in vindication of himself after a court litigation in which he had been involved.
- Beaumont, Francis**.—(1584-1616.) An English dramatist and poet.
- Beauregard, Pierre Gustav Toutant**, 11, 450.
- Beauty and the Beast**, a French Fairy Tale, 3, 67.
- Beauty, Laws of**, 1, 158.
Value of, 14, 298.
- Beauvoir**.—The name of the home occupied by Jefferson Davis, in Mississippi, after the Civil War, during which all of his property had been confiscated or destroyed. (See DAVIS, JEFFERSON.)
- Beaver**, 4, 50.
- Beaver Dam (Canada), Battle of**, 11, 216.
- Beaver dams**, 4, 51.
Food of the, 4, 52.
Fur of the, 4, 52.
Geographical distribution of the, 4, 50.
Gnawing of the, 4, 51.
Home of the, 4, 52.
- Beaver Falls**.—A borough in Beaver Co., Pa., has various manufactures and is largely controlled by the Harmony Society of Economy. Pop. (1900), 10,054.
- Bechuanaland**.—An English colony and protectorate in South Africa, lying to the west of the Transvaal. Area, 213,000 sq. miles.
- Becket, Archbishop of Canterbury**, 10, 261.

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Beckwith, James Carroll.—Born at Hannibal, Mo., 1852. An American portrait and genre painter; a pupil of Carolus Duran; became a member of the National Academy in 1894.

Becky Sharp.—One of the principal characters in "Vanity Fair," by Thackeray.

Bed, Cleansing from vermin, 1, 302.

Preparing for a sick room, 1, 303.

Bedbugs, To destroy, 1, 128.

Bede, Adam.—The name and principal character of a novel by George Eliot.

Bedel, Timothy, 11, 69.

Bedell, Gregory Thurston.—Born at Hudson, N. Y., 1817; died, New York, 1892. An American bishop of the Protestant Episcopal Church. He resigned his bishopric through illness in 1889; was author of "Canterbury Pilgrimage to the Lambeth Conference," "The Pastor," and "Centenary of the American Episcopate."

Bedell, Gregory Townsend.—Born on Staten Island, N. Y., 1793; died at Baltimore, Md., 1834. An American Protestant Episcopal clergyman and hymn writer.

Bedford, Gunning S.—Born at Baltimore, Md., 1806; died, New York City, 1870. An American physician and professor of obstetrics in the University of New York (1840-62); wrote "Diseases of Women and Children," "Principles and Practice of Obstetrics," etc.

Bedlam.—In London, a famous asylum for the insane. Founded about 1247; originally a priory.

Bedott, Widow.—Pseudonym of Mrs. Frances Miriam Whitcher, author of the "Widow Bedott Papers."

Beds and bed covers, 1, 19.

Beds for children, 1, 22.

Bee, Bernard E., 11, 453.

Bee, Bumble, 4, 328.

Habits of the, 4, 329.

Carpenter, 4, 329.

Habits of the, 4, 329.

Drone, 4, 325.

Honey, 4, 325.

Leaf-cutter, 4, 330.

Mason, 4, 330.

Queen, 4, 325.

Solitary, 4, 329.

Sting of the, 4, 328.

Tailor, 4, 330.

Habits of the, 4, 330.

Worker, 4, 325.

Bee-bird, Red, 4, 190.

Bee martin, 4, 198.

Beech, American, 4, 435.

Blue, 4, 425.

family, 4, 435.

Beech — Continued.

Purple, 4, 436.

Water, 4, 425.

Beecher, Catherine Esther.—Born at East Hampton, L. I., 1800; died, Elmira, N. Y., 1878. An American educator and writer, daughter of Lyman Beecher; author of "An Appeal to the People," "Common Sense Applied to Religion," "Domestic Service," etc.

Beecher, Edward.—Born at East Hampton, L. I., 1803; died, 1895. An American Congregational clergyman and theological writer; son of Lyman Beecher.

Beecher, Henry Ward.—Born, Litchfield, Conn., 1813; died, Brooklyn, N. Y., 1889. A noted American Congregational clergyman, lecturer, reformer, and author; son of Lyman Beecher. He was pastor of Plymouth Congregational Church, Brooklyn, for forty years, from 1847 to 1887. He was one of the early editors of the "Independent"; founder and editor of the "Christian Union," and one of the most prominent of anti-slavery orators. In 1863 he visited England and delivered several addresses on subjects relating to the Civil War, then in progress in the U. S. He wrote "Lectures to Young Men," "Star Papers," "Freedom and War," "Eyes and Ears," "Aids to Prayer," "Earlier Scenes," "Evolution and Preaching."

Beecher, Henry Ward, fondness for jewels, 1, 196.

referred to, 14, 12.

Life of, 8, 276.

Beecher, Lyman.—Born in New Haven, Conn., 1775; died, Brooklyn, N. Y., 1863. An American Congregational clergyman and theologian; President of Lane Theological Seminary, Cincinnati, O. (1832-51); worked as a temperance and anti-slavery reformer and controversialist; author of "Views in Theology," "Six Sermons on Temperance," etc.

Beecher, Rev. Lyman, 8, 276.

Beelzebub (God of Flies.)—A name for Baal among Philistines. Later, the name was given to the chief of evil spirits.

Beer, Fermentation of, 5, 235.

Beer, Spruce, 4, 416.

Beers, Ethelinda Eliot.—Born at Goshen, N. Y., 1827; died there, 1879. An American poet, best known as author of that touching lyric of the Civil War, "All Quiet along the Potomac To-night." She wrote under the pseudonym, Ethel Lynn.

Beers, Henry Augustin.—Born at Buffalo, N. Y., 1847. An American man of letters. He edited "A Century of American Literature,"

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- and is the author of a "Sketch of English Literature."
- Bees, 4, 325.**
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- Beet, 5, 52.**
- Beet-sugar, 5, 52.**
- Beethoven, Ludwig von, 9, 84; 14, 7, 227.**
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- Beetles, 4, 348.**
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 Fire-fly, **4, 349.**
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 Lady-bug, **4, 349.**
 Lightning bug, **4, 349.**
 Potato-bug, **4, 349.**
 Water, **4, 349.**
 Whirligig, **4, 349.**
- Beggar's Opera, The.**—A famous opera written by John Gay and produced at Lincoln's Inn Fields, London, 1728.
- Begonia, 5, 52.**
- Behring Sea fisheries, 12, 199.**
- Beirut, or Beyrout, or Bairut.**—The chief seaport of Syria, Asiatic Turkey. It has considerable commerce with Great Britain and other countries; also much historical interest. Pop. (1889), 118,800.
- Beirut, Palace of music at, 1, 239.**
- Bel, or Baal, 10, 58.**
- Belden, A. L.,** on "The manufacture of hats," **13, 396.**
- Belfast.**—A capital city of Ireland; the second in point of population and first in manufactures and trade. It contains a number of leading educational institutions. Pop. (1901), 348, 965.
- Belgian Hare, 4, 44.**
- Belgium.**—A kingdom of Europe bounded on the northwest by the North Sea; on the north by the Netherlands; on the east by Prussia and Luxemburg; on the west and southwest by France. The government is a hereditary constitutional monarchy, having a king, senate, and chamber of representatives. It comprises the lower part of the former kingdom of the Netherlands, as recognized by the Congress of Vienna. It has nine provinces, and is not only one of the smallest, but is the most densely settled country in Europe. It is an agricultural and manufacturing country; coal and iron abound and the useful metals are extensively worked. Brussels and Tournay are famous for their carpets, Bruges for its lace, and other sections for linen, cotton, and wool. The people are of German and Celtic stock. The constitution was liberalized in 1893. The Congo Free State in Africa virtually belongs to Belgium. Area, 11,373 sq. miles; pop. (1899), 6,744,532.
- Belgium becomes independent, 10, 361.**
 History of, **10, 299.**
 in Congo Free State, **11, 23.**
- Belgrade.**—The capital of Servia, and the center of trade between Austria-Hungary and the Balkan Peninsula. A place of much historical interest. Pop. (1895), 59,115.
- Belgrade, Battle of, 10, 340.**
- Belgravia.**—A fashionable quarter of London, which includes Belgrave Square, Grosvenor Place, etc.
- Belisarius, 10, 236.**
- Belknap, Jeremy, 11, 53.**
 William Worth, **11, 453; 12, 305.**
- Bell, Alexander Graham, Life of, 5, 325.**
 on the "Secret of Success," **8, 126.**
 referred to, **14, 178.**
- Bell, Sir Charles.**—(1774-1842.) A distinguished English physiologist and anatomist. The discoverer of important physiological facts, and the author of "Anatomy of Expression," "Anatomy of the Brain," "System of Comparative Surgery."
- Belladonna, 5, 53.**
 Antidote for poisoning by, **5, 53.**
- Bellamy, Edward.**—Born, 1850; died, 1898. An American economist and journalist; was widely known as the author of "Looking Backward" and "Equality."
- Bellamy, Dr., 14, 193.**
- Bellamy, Joseph.**—Born at North Cheshire, Conn., 1719; died at Bethlehem, Conn., 1790. An American Congregational clergyman and theologian, author of "True Religion Delineated."
- Belle Hélène.**—An opera bouffe by Offenbach, first presented in 1864.
- Bellerophon, 10, 111.**
- Bellingham, Richard, 11, 53.**
- Bellini Giovanni, 9, 226.**
- Bellini Jacopo, 9, 226.**
- Bellows, Henry Whitney, 11, 453.**
- Bells, The King of.**—The largest bell in the world is at Moscow. It is 19 feet 3 inches high, and measures, around the mouth, 60 feet 9 inches. It is estimated to weigh 443,732 pounds.
- Bellwort, 5, 43.**
- Bell-metal, 5, 211.**
- Belmont, August, 12, 198.**
- Belmont (Mo.), Battle of, 11, 453.**

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- Beloit College.**—An institution of learning at Beloit, Wis., founded in 1847 and controlled by the Congregationalist denomination.
- Beloochistan, or Baluchistan.**—In Asia, a district lying south of Afghanistan and west of India. It is mountainous and to a large extent a desert. It is under British management as to its foreign interests. Area, 130,000 square miles. Pop., about 500,000.
- Belot** (*bā-lō'*), **Adolphe.**—(1829-1890.) A French novelist and dramatist.
- Belshazzar.**—The last king of the Chaldean dynasty in Babylonia.
- Belshazzar, 10, 182.**
- Belted kingfisher, 4, 145.**
- Belus, Temple of, 10, 182.**
- Benares.**—A division of British India. Area, 18,338 square miles. Pop. (1891), 10,632,190.
- Benares.**—The capital of the division of Benares, India. Founded about 1200 B. C.; it is one of the largest cities of northern India, and being the principal Hindu holy city, is a resort for pilgrims. Pop. (1901), 203,095.
- Benedict I.**—Bishop of Rome (574-578).
- Benedict, Professor, 14, 50.**
- Benedict, Saint.**—(480-543.) An Italian monk, founder of the order of the Benedictines (529) at Monte Cassino.
- Benefit of the Clergy, 10, 261.**
- Benevento.**—The capital of the province of Benevento, Italy. The seat of a cathedral and a famous arch erected in honor of Trajan (114 A. D.).
- Beneventum, 10, 207.**
- Bengal.**—A presidency and province in western Hindustan. The presidency is made up of the four provinces, Bengal proper, Bahar, Chota Nagpur, and Orissa tributary states. Area, 151,543 sq. m. Pop., 74,713,020.
- Ben Hur.**—The title and principal character of a novel by Lewis Wallace; the scene is laid in the time of Christ. The story has been successfully dramatized.
- Beni Hassan, Tomb of, 1, 216.**
- Benjamin, Judah Peter, 12, 198.**
- Benjamin, Park.**—Born at Demerara, British Guiana, 1809; died at New York, 1864. An American journalist and poet. With C. F. Hoffman, he was joint editor of the "American Monthly Magazine"; he established the "New World" in 1840 and was connected with various other journals.
- Benjamin, Park, on "Great Problems of Invention, 5, 362.**
- Ben Macdhui, 13, 166.**
- Bennett, James Gordon.**—Born at New Mill, Banffshire, Scotland, 1795; died at New York, 1872. An American journalist; founder of the "New York Herald" (1835). He sent Henry M. Stanley as an explorer to Africa (1871-72).
- Bennington.**—A town in southeastern Vt., near which the Americans under Stark defeated the British forces under Baum and Breyman, Aug. 16, 1777. Pop. (1900), 5,656.
- Bennington, Battle of, 11, 69.**
- Benson, Carl.**—The pseudonym of Charles Astor Bristed (which see).
- Benson, Egbert, 11, 70.**
- Benton, 11, 454.**
- Benton, Jessie.**—A daughter of Senator Thomas H. Benton, of Mo. A romantic courtship culminated in elopement and marriage with John C. Fremont. She was a woman of extraordinary force of character and graces of mind and person, and in her devotion to Gen. Fremont throughout his career she became widely known and admired. (See FRÉMONT, JOHN CHARLES.)
- Benton, Thomas Hart.**—Born at Hillsborough, N. C., 1782; died at Washington, 1858. An American Democratic statesman. Was U. S. senator from Mo. (1821-51), and author of "Thirty Years' View," "Abridgment of the Debates of Congress from 1789 to 1856," etc. He was popularly known as "Old Bullion," because of his advocacy of gold and silver money and his opposition to issues of paper currency.
- Bentonville (N. C.), Battle of, 11, 454.**
- Benzine, 5, 228.**
- Benzoic acid, 5, 244.**
- Benzoin, Gum, 5, 244.**
- Beowulf, Anglo-Saxon legend, 3, 427.**
- Berea College.**—A school at Berea, Ky., founded 1856-58, non-sectarian and coeducational; usually 60 per cent. of the students are colored.
- Bergamot, 5, 53.**
- Bergamot mint, 5, 67.**
- Bergamot oil, 5, 53.**
- Bergh, Henry, 12, 199.**
- Berkeley.**—A town in Alameda County, Cal., the seat of the University of California, also of the State Agricultural College and other public institutions. Pop. (1900), 13,214.
- Berkeley Springs, or Bath.**—A watering-place in W. Va. noted for its medicinal springs.
- Berkeley, Lord, 11, 47.**
- Berkeley, William, 11, 43.**
- Berkeley, Sir William, Revolt of colonists against, 11, 43.**
- Berlin, Conference of, 11, 10.**
- Decree, 11, 216.
- International Congress of, 11, 12.
- Treaty of, 11, 23.

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Berlioz, Hector, 9, 92.

Bermuda Hundred, 11, 454.

Bermudas.—A group of small islands owned by Great Britain and lying about 600 miles east-southeast of Cape Hatteras. They are sometimes called the Somers Islands, after Lord John Somers, who was shipwrecked on them in 1609. England took possession in 1611, and has used them for naval purposes. There are between 350 and 500 islands, the largest being St. George and Great Bermuda. Only about twenty of the islands are inhabited: they are governed as a crown colony. The population is about 17,535 and the group derives its name from Juan Bermudez, who discovered them in 1522. Bishop Berkeley, who wrote the poem in which occurs the prophetic line, "Westward the course of empire takes its way," resided at one time in the Bermudas.

Bernadotte, King of Sweden, 10, 359.

Bernard of Clairvaux, referred to, 8, 15.

Bernard, Simon, 11, 340.

Bernhardt, Sara, quoted, 1, 161.

Berreguete, Alonzo, 9, 255.

Berreguete, Pedro, 9, 255.

Beryl, Superstitions about the, 1, 195.

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papyrifera, 4, 445.

populifolia, 4, 446.

rubra, 4, 445.

Beveridge, Albert J., referred to, 8, 40.

Life of, 12, 199.

Bhavini, 10, 20.

Bhután.—A country in the eastern Himalaya Mts.: extremely mountainous, which gives the country every variety of climate and range of products. Magnificent forests yield valuable timber products. Other productions are silk, cloth, and arms. Capital, Punakha. Area, 16,800 miles; pop., 30,000.

Bi.—A prefix indicating the number 2; used especially in scientific terms.

Bia'fra, Bight of.—A large bay at the head of the Gulf of Guinea, on the west coast of Africa.

Biard, Auguste François.—(1800-1882.) Celebrated French painter.

Biarritz (*bê-är-rêts*).—A watering-place on the Bay of Biscay, 5 miles from Bayonne. Napoleon III. and the Empress Eugenie made it their summer residence. Pop., 9,000.

Bias (middle of the 6th cent.).—One of the "seven sages" of Greece.

Bible, Facts about.—It contains 3,566,480 letters, 773,746 words, 31,173 verses, 1,189 chapters, and 66 Books. The word "and" occurs 46,277 times. The middle verse is the 8th chapter of the 118th Psalm. The longest verse is the 9th of the 8th chapter of Esther. The shortest verse is the 35th of the 11th chapter of John. The Bible was divided into chapters in the 13th century by Cardinal Hugo. It was divided into verses in 1551 by Robert Stephens, the printer.

The Roman Catholic Bible is called the Douay version, on account of the translation made at that place in 1609-10.

The Mazarin Bible was the first book ever printed by movable types and was done by Gutenberg and Faust. Four have been sold in recent years, at prices ranging from \$19,500 to \$10,000.

The Bible has been printed by the British and Foreign Bible Society in 300 languages.

The Bug Bible, printed by Matthew in 1551, made the word "terror" in Psalm XCI. 5, read "bugges," "Thou shalt not be afraid for the *bugges* by night."

The Breeches Bible, published in 1560 says that Adam and Eve made "breeches" of leaves for themselves instead of "aprons."

The Treacle Bible, published in 1568 asks, "Is there no *trayacle* in Gilead" instead of *balm*.

The Rosin Bible was the Douay version of 1610 which rendered that same word "balm" by the word "rosin."

Bible, The Alcuin, 9, 273.

Green quoted on the, 8, 367.

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Biceps flexor capiti muscle, 1, 275.

cruris muscle, 1, 276.

muscle, 1, 275.

Bicycle, 5, 398.

Bicycling, 6, 156.

Biddeford.—A city in York County, Me., 17 miles from Portland on the Saco. Pop., 16,145.

Biddle, Clement, 11, 70.

Biddle, John, 11, 216.

Biddle, Nicholas, 11, 70, 340.

Biddle, Richard, 11, 340.

Bidpai, Hindoo fable writer, 3, 167.

Bidwell, John, 12, 200.

Bierstadt, 9, 330.

Bierstadt, Albert, 14, 38.

Big Bethel (Va.), **Battle of**, 11, 454.

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Big Black (Miss.), **Battle of**, 11, 455.

Big Bone Lick.—A salt spring in Boone Co., Ky., noted for its fossil deposits.

Bigelow, John.—Born at Malden, N. Y., 1817. An American author, journalist, and diplomat. Editor and one of the proprietors of the New York "Evening Post"; consul at Paris and minister to France (1865-66). He edited Franklin's "Autobiography" and published "Jamaica in 1850," "Life of Fremont," "Molinos, the Quietist," etc.

Big-horn sheep, 4, 24.

Biglow Papers, The.—A series of humorous and sarcastic poems of a political character by James Russell Lowell, in the New England dialect, under the pseudonym of "Hosea Biglow." The first series appeared during the Mexican War and the second during the Civil War.

"**Big-stick**" policy, 12, 191.

Big Trees of California.—See SEQUOIA.

Bikh, 10, 10.

Biliousness, Treatment of, 1, 330.

Bill, 13, 38.

Bill book, 13, 39.

Bill clerk, 13, 38.

Bill-fish, 4, 304.

Billings, William.—Born at Boston, 1746; died there, 1800. An American music composer, noted as being the first; he published "The Singing-Master's Assistant" and the "Psalm-Singer's Amusement."

Billings, William, 11, 216.

Bill of entry, 13, 38.

Bill of exchange, 13, 38.

Bill of health, 13, 38.

Bill of lading, 13, 38.

Bill of parcels, 13, 38.

Bill of right, 13, 38.

Bill of Rights.—An instrument to which, in 1689, William and Mary subscribed when they accepted the crown of England from the Convention Parliament. By it the right of subjects to petition, the right of Parliament to freedom of debate, and the right of electors to choose representatives and other privileges were guaranteed; but its provisions did not extend to the Colonies. In their definition of the rights of the citizen, other state constitutions adhere closely to the Bill of Rights. It was the basis of the Virginia constitution of 1776; and the Constitution of the U. S., when drafted, was denounced because it did not contain some such guarantee of personal rights as is found in the English instrument. It might have failed of ratification had not the Federalists pledged themselves to remedy this defect. The first ten amendments

to the Constitution form a partial redemption of their promise.

Bill of sale, 13, 38.

Recording a, 13, 182.

Bills payable, 13, 38.

Bills receivable, 13, 38.

Bimetallism, 13, 156.

Bingham, John A., 12, 200.

Binghamton.—County seat of Broome Co., New York, at the junction of the Susquehanna and Chenango rivers. Pop., 39,647.

Binney, Amos.—Born at Boston, Mass., 1803; died at Rome, Italy, 1847. An American naturalist and patron of science. He wrote "Terrestrial and Air-Breathing Mollusks."

Binney, Horace, 11, 340.

Birch Family, 4, 443.

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Red, 4, 445.

River, 4, 445.

Silver, 4, 446.

Sweet, 4, 443.

White, 4, 446.

Yellow, 4, 444.

Bird-catcher and the Thrush, Turkish fable, 3, 182.

Bird Grip, The, 3, 138.

Bird, Longest Time That Any, Has Existed Without Food.—The South American Indians assert that the condor can fast for forty days. The raptorial birds are satisfied with a single repast, and as those which feed upon carrion and do not capture their own prey cannot find the wherewithal to satisfy their appetites at will, they are frequently compelled to endure long periods of hunger. An eagle can live twenty-eight days without food. There are instances on record of hens being left accidentally without food for three or four weeks. When discovered they were in a very exhausted state, but soon regained their appetites.

Bird-nests, Edible, 5, 102.

Bird of Paradise, 4, 205.

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Red, 4, 207.

Six-shafted, 4, 207.

Superb, 4, 207.

Texan, 4, 199.

Twelve-wired, 4, 207.

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Bird, Robert Montgomery.— Born at New Castle, Del., 1803; died at Philadelphia, Pa., 1854. An American physician and novelist; author of several tragedies, one of which, "The Gladiator," was a favorite with Edwin Forrest. He wrote "Calavar," "The Infidel," and other novels.

Bird, The, Which is the Best Foreteller of the Weather.— The crow as a weather prophet is entitled to the highest distinction. When rain is approaching a whole community will rise from their nests or perches, wheel about for some time, and then return to their haunts. Weather watchers state that there is a remarkable correspondence between the length of time spent in these aerial evolutions and the duration of the disturbance when it comes. When the birds remain unusually long on the wing, and indulge in loud clamor, the ensuing shower or tempest will not only be the longer delayed, but will be one of greater proportion and duration than ordinary. The peacock indulges in shrill screams when wet weather is approaching. High-flying swallows are a sign of fair weather, and when their insect-prey flies low, and the pursuing swallow skims over the surface of the earth, wet weather is foretold. Rooks and gulls and other far-flying birds do not venture far from home when heavy weather is approaching. In the English Channel the fishermen regard the curlew on dark nights as the certain precursor of an east wind. An appearance of the sea-mew promises rain and high southwest winds. Seagulls in the field mean a storm from the southeast.

Bird Rocks, islands, 4, 232.

Bird wounded by an arrow, French fable, 3, 187.

Birds, Books suggested by Ernest Thompson Seton, 4, 7.

Characteristics of structure of, 4, 95.

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devoid of teeth, 4, 95.

Eggs of, 4, 112.

Bird-nests, 4, 113.

Robbing, 4, 113.

Birds, at What Hour Do They Go to Sleep.— Many birds, probably the great majority, go to sleep within a very short time of sunset, while numbers continue to roam, and, like the nightingale, pour forth their song for hours up to near midnight. The blackcap is occasionally known to trill as late as ten o'clock on a fine evening in June; the woodlark also frequently sings till late at night, and has on that ground been mistaken for the nightingale. The sedge-warbler keeps up a continual

chirping for an hour or two after sunset. The thrush does not go to sleep in the summer evenings till half-past nine. The robin is the latest retiring bird in the United Kingdom; it may often be heard singing until midnight in the early summer, and in the winter is to be seen hopping about long after all other birds have sought repose. The cuckoo is the earliest riser in the morning, followed by the greenfinch at 1:30 A. M., the blackcap at 2:30, the quail at 3, the blackbird at 4, the robin and wren at 4:30, the thrush about 4:50, followed by the house sparrow, tomtit, and lark at a later hour.

Birds' Eggs, 4, 112.

Birds, Place of, among animals, 4, 95.

Power of flight, 4, 95.

Raptures, 4, 103.

Slaughter of, 4, 113.

Birds, Feathers of, 4, 95.

Frank Roe Batchelder on, 4, 95.

Birds, Smallest, Where They Are Found.— In the New World exclusively. The humming-birds, of which there are nearly four hundred species, include the minutest specimens of bird-life known to zoölogists. They are found on the American continent, and nowhere else, and range from the neighborhood of Cape Horn in the south to as far north as Sitka, and some species are found as much as 15,000 ft. above the level of the sea. The smallest species of humming-bird is known to ornithologists as *Mellisuga Minima*. It only measures $1\frac{1}{4}$ in. in length, and weighs but 20 grains. The finest collection of the skins of these birds ever made by a single collector was that exhibited by Mr. John Gould at the Zoölogical Gardens in 1851. It was bought by the British Museum for \$15,000. Mr. Gould's elaborate work on "Humming Birds" extends to 5 vols. folio, with richly colored plates, and took thirteen years to prepare, having been commenced in 1849 and completed in 1862. A copy of this book, with the supplement, cannot be procured now for less than \$375.

Birds, Song of, 4, 96.

Symbolism of, 2, 184.

Temperature of blood of, 4, 95.

Birmingham.— A city in the center of England, in Warwickshire. The fourth city in size in Great Britain. Noted especially for metallic manufactures. It is mentioned in the Domesday Book. Pop. (1901), 522,182.

Birmingham.— The capital of Jefferson Co., Ala., one of the chief iron manufacturing cities in the U. S. It is also an important railroad center. Pop. (1900), 38,415.

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- Birney, David Bell**, 11, 455.
Birney, James Gillespie, 11, 340.
Birthstones, 1, 195.
Bisection of angles, 7, 277.
Bishops'-cap, 5, 47.
Bishopsgate.—The principal gate of the north wall of Old London. Bishopsgate Street now passes over the site of the old gate.
Bismarck, Life of, 10, 379.
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Bituminous coal, 5, 455.
Bivalves, 4, 369.
Bjerregaard, C. H. A., on the Zoroaster legend, 3, 300.
 on Arabic legends, 3, 213.
Björnson (*byérn'son*), **Björnstjerne**.—Born, 1832. Norwegian dramatist, poet, and novelist.
Black-bellied plover, 4, 129.
Black-and-tan terrier, 4, 21.
Black-and-white creeper, 4, 185.
Black-and-white warbler, 4, 185.
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Black buzzard, 4, 138.
Black cockade, 11, 70, 216.
Black cockatoo, 4, 209.
Black code, The, 11, 340.
Black-crowned night heron, 4, 224.
Black death, 10, 266.
Blackfeet Indians.—Now confined to their reservation in Mont. They belong to the Siksika confederation of the Algonquin stock and were, when unconfined, quarrelsome and warlike. They were formerly of the Kino tribe, from which they separated and migrated up the Missouri River. The term Blackfoot, or Blackfeet, was also applied to the Sihasapa Indians, whose leader was John Grass.
Black-fish, 4, 298.
Black-fly, 4, 351.
Black Forest, The.—A famous region in the eastern part of Baden and the western part of Württemberg, lying between the valleys of the Neckar and the Rhine.
Blackfrairs.—A historical locality in London, once the site of the monastery of the Black Friars, of the Dominican order, who established themselves in London in 1221.
Blackfriars Theatre.—A famous theatre of London, established in the latter part of the 16th century. It was destroyed in 1655. Shakespeare wrote his plays for this theatre and for the Globe.
Black Friday, 13, 92.
Black Hawk.—Born, Kaskaskia, Ill., 1767; died near the Des Moines River, Ia., 1838. An American Indian, chosen chief of the Sacs about 1788. He was the leader in the revolt of the Sacs and Foxes in 1832.
Black Hawk War, 11, 340.
Black-headed gull, 4, 218.
Black Hills.—A group of mountains in S. D. and Wyo., noted for their mineral wealth and the discovery of gold in 1874. The highest point is Harney's peak, 7,215 ft. in height.
Blackie, John Stuart.—(1809-95.) A Scotch poet and philologist; professor of Greek at Edinburgh, 1852-82.
Blackie, John Stuart, 14, 264.
Black in color, 5, 304.
Black Jack.—A nickname applied to Gen. John A. Logan, by his soldiers, on account of his dark complexion and black hair.
Black Jack oak, 4, 464.
Black, Jeremiah Sullivan, 12, 200.
Black-letter.—The name given in England and America to the Gothic types. It was the form of type used in books, which makes black-letter books and Mss. much prized by book-lovers and collectors.
Blacklock, Thomas, Blindness of, 8, 27.
Black maple, 4, 405.
Blacklock, William James.—(1815-1858.) A noted Scottish landscape painter.
Blackmore, Richard Doddridge.—(1825-1900.) An English lawyer and novelist. "Lorna Doone" is his most noted book.
Black Mountains.—A group of mountains in western N. C., the highest in the Appalachian system. The chief peak is Mount Mitchell, 6,711 ft. high.
Black-poll warbler, 4, 186.

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- Black Prince, The.**—Edward, Prince of Wales, son of Edward III. of England. He was so called from the color of his armor.
- Black Rock.**—A district in the municipality of Buffalo, N. Y., situated on the Niagara River; the scene of several engagements between the Americans and British (1812-14).
- Black Rock (N. Y.), Battle of, 11, 217.**
- Black rot, 5, 97.**
- Black rust, 5, 97.**
- Black Sea.**—A large sea lying between Europe and Asia. It is 700 miles long and 380 miles wide, presenting a total area of 172,000 sq. miles. It was known to the Ancients as the Euxine Sea. It communicates with the Mediterranean by the Bosphorus, Sea of Marmora, and the Dardanelles. The waters are tideless and brackish.
- Blacksmith, The, 13, 420.**
- Black stone of the Kaaba, 1, 194.**
- Black stork, 4, 227.**
- Black, William.**—(1841-1898.) British novelist and journalist.
- Blackstock's (S. C.), Battle of, 11, 70.**
- Blackstone, William, 11, 53.**
- Blackstone, Sir William.**—(1723-1780.) Eminent English jurist and commentator on English law.
- Black swan, 4, 111.**
- Black, Symbolism of, 2, 185.**
- Black tern, 4, 219.**
- Black-throated blue warbler, 4, 186.**
- Black-throated green warbler, 4, 186.**
- Black-throated loon, 4, 220.**
- Black Warrior, The, 11, 341.**
- Blackwell, Dr. Elizabeth,** first woman physician in America, 7, 321.
- Blackwell's Island.**—In the East River, New York City. Contains several city institutions.
- Blackwood, William.**—(1776-1834.) Scotch publisher and bookseller. He was founder and editor of "Blackwood's Edinburgh Magazine."
- Bladensburg (Md.), Battle of, 11, 217.**
- Blaine, James Gillespie, 12, 201.**
- Blair, Francis Preston, 11, 455.**
- Blair, Francis Preston.**—Born at Abingdon, Va., 1791; died at Silver Spring, Md., 1876. An American journalist and politician, editor of the Washington "Globe" (1830-45).
- Blake, Lillie Deveraux,** on "If I were a Girl Again," 1, 254.
- Blake, William, 9, 282.**
- Blakeley, Johnston, 11, 217.**
- Blanchard, Thomas, 12, 210.**
- Bland Bill, 12, 210.**
- Bland dollar, 13, 156.**
- Bland, Richard Parks, 12, 210; 13, 156.**
- Bland, Theodoric, 11, 70.**
- Blankets, Navajo, 1, 34.**
- Blarney.**—A village near Cork, Ireland; the seat of the Castle, built in 1446, which contains the famous Blarney Stone.
- Blarney Stone.**—In Blarney Castle, near Cork, Ireland, a block of stone bearing the name of the founder of the castle, together with the date, and said to possess the power of imparting, to those whose lips touch it, a gift of persuasive speech.
- Blaser, Gustav, 9, 404.**
- Blast furnace, 5, 218.**
- Blasting gelatine, 5, 205.**
- Blavatsky, Madame.**—(1831-1891.) A noted Russian theosophist, largely instrumental in the founding of the "Theosophical Society," and the author of several books.
- Bleaching powder, 5, 209.**
- Bleaching with chlorine, 5, 185.**
- Bleak House.**—A novel by Charles Dickens, by many considered his greatest work. Published 1852-53.
- Bleeding.**—If blood spurts from a wound an artery has been cut; bind *above* the wound, with India-rubber tubing, handkerchief, or strap. If the blood does not spurt, a vein has been cut, apply the same means *below* the wound. Pressure, in cases of scalp wounds, may easily be applied on one or other sides of the wound directly upon the bone.
- Bleeding from the nose, 1, 360.**
- Bleeding, To stop, 1, 358.**
- Blenheim (blen'im).**—A village in Bavaria, situated on the Danube, the scene of the battle of Höchstädt, in which the Bavarians were defeated by the English, and allied forces, under the Duke of Marlborough and Prince Eugene.
- Blenheim Palace.**—A noted palace at Woodstock, Oxfordshire, Eng. It was erected by the state, 1705-16, for the first Duke of Marlborough.
- Blenheim spaniel, 4, 21.**
- Blennerhasset, Harman, 11, 217.**
- Blennerhasset's Island.**—A small island in the Ohio, two miles below Parkersburg, W. Va., so called from Harman Blennerhasset, who was famous in connection with Burr's conspiracy.
- Blimber, Dr.**—In Dickens's "Dombey and Son," the head of the school to which Paul Dombey was sent.
- Blind men of eminence, 8, 26.**
- Bliss, Cornelius Newton, 12, 210.**
- Blockade.**—A well-settled principle of international law provides that a nation, in time of war, may make intercourse with its enemy's

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- ports unlawful, hazardous, or impossible on the part of neutrals. The Dutch introduced this principle as early as 1584 and it was gradually exercised by the other powers, with the proviso that to be binding a blockade must be effective. Warships, which patrol the entrances to the enemy's harbors, arrest such vessels as attempt to enter or leave its ports. When a vessel of this character contains goods or persons contraband of war, it is condemned by a prize court and sold, the officers and crews of the blockading squadron dividing the proceeds among themselves. This course is now approved by the general usage of the most advanced nations. It was exercised by Great Britain on the Elbe in 1803; by Denmark in the Baltic in 1848-49 and in 1864, and by the Allies in the Gulf of Finland in 1854. In 1861, immediately upon the breaking out of the Civil War, the U. S. Government declared a blockade of all the southern sea and gulf ports. The Confederate government stipulated that every vessel entering its ports should carry arms and ammunition as part of its cargo. Plymouth, Newbern, Wilmington, Charleston, and Mobile were among the southern ports favored by blockade-runners, and they were vigilantly watched by U. S. cruisers, which captured many foreign vessels as well as Confederate ships. The blockade was an important factor in the success of the Union cause, as, to a large extent, it prevented the Confederates from securing external assistance. In 1898, Acting Rear-admiral Sampson blockaded the Cuban ports, from the outbreak of the war with Spain until the destruction of Cervera's fleet.
- Block Island.**—An island in the Atlantic Ocean, off Point Judith, in R. I., to which it belongs; it is a noted summer resort.
- Block-letter alphabet,** 7, 273.
- Block System of Signaling Trains on Railroads.**—It is the division of a railroad into telegraphic districts or blocks, at each of which there is a station. When a train enters one block, a semaphore is shown and no other train is allowed within that area at that time.
- Blodget, Lorin.**—Born at Jamestown, N. Y., 1823. An American physicist and statistician; author of "Climatology of the United States," etc.
- Blodgett, Samuel,** 11, 53.
- Blois** (*blwä*).—The capital of the department of Loir-et-Cher, France: the seat of a magnificent castle of great historical interest.
- Blondel.**—A celebrated French minstrel of the 12th century. He was a favorite of Richard the Lion-heart of England. It is said that Blondel assisted in the release of King Richard from imprisonment by the Duke of Austria.
- Blondin, Charles,** 12, 210; 14, 200.
- Blood, Circulation of the,** 1, 280.
- Blood of birds, Temperature of,** 4, 95.
- Blood of mammals, Temperature of,** 4, 95.
- Blood of reptiles, Temperature of,** 4, 95.
- Blood, Purification of the,** 1, 292.
- Blood, Quantity moved by the heart,** 1, 283.
- Bloodhound, Cuban,** 4, 19.
- Bloodhounds** 4, 19.
- Blood-leaved maples,** 4, 408.
- Bloodroot,** 5, 31.
- Bloodstone, March birthstone,** 1, 197.
- Bloody arum,** 5, 16.
- Bloody assizes,** 10, 326.
- Bloody Mary,** 10, 301.
- Bloody Shirt,** 10, 107; 11, 455.
- Bloomer, Mrs. (AMELIA JENKS).**—Born at Homer, N. Y., 1818. An American reformer and lecturer on temperance and the rights of women, but chiefly known by her adoption of a reformed dress consisting of Turkish trousers and a dress with short skirts. This garb, known as "bloomers," was adopted and worn for a time by a few women, but it was finally discarded and is now rarely seen.
- Bloomfield.**—A town in Essex Co., N. J., 12 miles from New York. Pop. (1900), 9,668.
- Bloomington.**—The capital of McLean County, Ill.; a railroad center; has several educational institutions and some manufactures. Pop. (1900), 23,286.
- Bloomsbury Square.**—A famous square in London.
- Blotter,** 13, 39.
- Blount, William,** 11, 70; 12, 305.
- Blow, Susan E,** quoted, 2, 58.
- Blowitz, Stephane Adolphe Oppen** *de*.—Born in Bohemia, 1825. A noted journalist, representative in Paris of the London "Times." For his aid in the suppression of the Commune, 1878, he was decorated with the badge of the Legion of Honor.
- Blücher von, Gebhard Leberecht.**—(1742-1819.) Field-marshal of Prussia. Took part in the Seven Years' War, the battles of Auerstädt, La Rothière, Laon, Ligny, and Waterloo.
- Bluebell,** 5, 28.
- Blue-Bird,** 4, 157.
- Mountain, 4, 158.
- Blue-Books.**—A name given to reports and other papers printed by order of the British Parliament, so called from the color of their wrapper. Also applied to the book issued by the U. S. Government, containing lists of all government employees, in the civil, military,

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- and naval departments, the cover of which is blue.
- Blue crane**, 4, 223.
- Bluefish**, 4, 276.
 Flesh of the, 4, 276.
 Food of the, 4, 274.
 Habits of the, 4, 274.
 How captured, 4, 277.
 Spawning of the, 4, 276.
- Blue flag**, 5, 29.
- Blue grosbeak**, 4, 188.
- Blue-Grass Region**.—A tract in central Ky. and Tenn., noted for its luxuriant growth of blue-grass. This grass has an especial value for pasturage and hay; and in this region are produced some of the finest horses and cattle in the world. The people are prosperous and are renowned for their hospitality. Lexington is in the blue-grass region of Kentucky.
- Blue Hen, The**.—A nickname of the state of Del. The regiment furnished by Del. in the American War of Independence, on account of its fighting qualities, was known as the "game cock regiment." One of its officers, Capt. Caldwell, noted as a fancier of game-cocks, maintained that a true game-cock must of necessity be the progeny of a blue hen. Hence arose the application of this epithet to the state.
- Blue Hills**.—A range of hills in Norfolk Co., Mass. The height of Great Blue Hill is 635 ft.
- Blue Jay**, 4, 152.
 Eggs of the, 4, 117.
 Nest of the, 4, 117.
- Blue laws**, 11, 53.
- Blue Licks, Battle of**, 11, 217.
- Blue lights**, 11, 217.
- Blue lory**, 4, 209.
- Blue Mountains**.—Mountain ranges in Jamaica, Australia, Oregon, Pennsylvania, and New Jersey, respectively.
- Blue Ridge**.—A chain of the Appalachian Mountains in Virginia and North Carolina. Highest peak 5,897 ft.
- Bluets**, 5, 24.
- Blue Victor**, 12, 210.
- Blue vitriol**, 5, 211.
- Blue-winged warbler**, 14, 186.
- Bluff City**.—An epithet sometimes given to Hannibal, Mo., from its position on a high bluff overlooking the Mississippi River.
- Blum, Robert Frederick**.—An American artist. Born at Cincinnati, 1857.
- Blunt, Edmund March**.—Born at Portsmouth, N. H., 1770; died at Sing Sing, N. Y., 1862. An American hydrographer, author of the "American Coast Pilot" (1796), etc.
- Boabdil** (*bō-āb-dēl'*), or **Abu Abdullah**.—The last Moorish king of Grenada. Dethroned by Ferdinand and Isabella in 1491.
- Boadicea**, Queen of the Iceni, 10, 236, 398.
- Boardman, George Dana**.—Born at Livermore, Me., 1801; died near Tavoy, British Burma, 1831. An American Baptist missionary in Burma.
- Board measure**, 13, 146.
- Board of Health, National**, 12, 338.
- Board of Trade**.—A body of business men voluntarily associated to promote commercial interests.
- Boar-hunting**, 4, 68.
 Wild, 4, 67.
- Boastfulness and lying**, 2, 255.
- Boat-sailing**, 6, 346.
 Sailboats and sailors, 6, 347.
- Boats, Kinds of**.—*Long-boat*: The largest boat of a ship; provided with masts and sails. It is used for defensive as well as for general purposes.
 Launch: Longer and more flat-bottomed than the long-boat, has a greater number of oars, and can be rowed faster.
 Barge: A narrow, long, light boat, used to carry the chief officers to and from ship.
 Pinnace: Used by inferior officers. A barge has 10 or more oars, while a pinnace has only 8.
 Cutter: Shorter but deeper and broader than either barge or pinnace; used for carrying light stores, provisions, and crew.
 Jolly-boat: A small cutter with 4 oars.
 Yawl: Small and used for the same purposes as cutters and jolly-boats.
 Gig: Long and narrow; rowed by 6 or 8 oars, and used when speed is required.
- Bobbin Boy, The**.—A nickname of Nathaniel P. Banks, given him because he worked as a boy in the cotton factory of which his father was superintendent. A book for boys with this title, containing his early life, has been published.
- Boboli** (*bō'bō-lē*) **Gardens**.—The public grounds about the Pitti Palace in Florence. The gardens were laid out in the 16th century, by the sculptor Tribolo.
- Bobolink**, 4, 156.
 Song of the, 4, 156.
- Bob White**, 4, 124.
 Eggs of the, 4, 114.
 Nest of the, 4, 113.
- Boccaccio** (*bok-kä'chō*), **Giovanni**.—A celebrated Italian writer; best known by his "Decameron."
- Bodley, Sir Thomas**.—(1545-1613.) An English diplomatist and scholar; the founder of the Bodleian Library.

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Body of Liberties.—A code compiled by Nathaniel Ward, a clergyman of Ipswich, Mass., and adopted in 1641 by the general court of that colony, as the basis of the common law. The Body of Liberties safeguarded life, liberty, property, and reputation, as well as prescribing some general rules for judicial procedure.

Boehm, Joseph Edgar, 9, 410.

Bœotia (*bē-ō'shiä*).—In ancient geography, a division of Central Greece. Its chief city was Thebes.

Bœotian League.—A confederacy of independent cities of Bœotia, finally dissolved 171 or 146 B. C.

Boer war, 11, 19.

Boer Wars.—See TRANSVAAL.

Boffin's Bower.—A successful charity for working girls in Boston, established by Miss Jennie Collins in 1870.

Bog iron ore, 5, 437.

Bogardus, Everard, 11, 53.

Bogotá (*bō-gō-tä'*).—The capital of the Republic of Colombia. Founded by the Spaniards 1538. Pop. (1891), about 120,000.

Bohemia.—1. In Austria-Hungary; a crownland, the capital of which is Prague. Agricultural and mining interests. Area, 20,060 sq. m. Pop. (1890), 5,843,094. 2. The term applied to a place frequented by professional people—particularly writers, musicians, and artists—who lead an unconventional life.

Bohemia manor, 11, 53.

Bohemian Girl.—A popular opera by Balfe; produced in 1843.

Bohemian wax-wing, 4, 196.

Bohn, 10, 52.

Bohn, H. G.—(1796–1884.) German author, publisher, translator, and founder, in London, England, of Bohn's Library of most valuable works in every department of knowledge published at a cheap rate.

Boies, Horace, 12, 210.

Boileau Despreaux (*bwä-lō' dā-prā-ō'*), **Nicholas.**—(1636–1711.) A distinguished French poet and critic.

Boiling-Point.—The temperature of a liquid cannot rise higher than its boiling-point, which is the temperature at which the liquid turns into vapor. The boiling-point of some of the liquids are as follows:—

Ether, 93° Fahr.

Alcohol, 173° Fahr.

Nitric Acid, 187° Fahr.

Water, 212° Fahr.

Turpentine (oil), 312° Fahr.

Phosphorus, 554° Fahr.

Sulphuric Acid, 600° Fahr.

Mercury, 662° Fahr.

Sulphur, 822° Fahr.

The boiling-point of water decreases with an increase of elevation; an elevation of 510 ft. above the sea-level makes a diminution of one degree.

Boils, Treatment of, 1, 343.

Bois de Boulogne.—One of the famous parks of Paris, covering an area of 2,158 acres.

Boisé City.—The capital and chief town of Idaho. Has important mining interests. Pop. (1900), 5,957.

Boisgobey (*bwä-gō-bā'*), **Fortuné Abraham du.**—(1821–1891.) A noted French novelist.

Boito (*bō-ē'tō*), **Arrigo.**—Born 1842. Italian poet and musical composer.

Bok, Edward William, on "Newspaper work for Girls," 7, 338.

Bokhara.—Central Asia, a Khanate under Russian influence. It is bounded on the north, east, and west by Asiatic Russia; on the northwest by Khiva, and on the south by Afghanistan. Area, 92,000 square miles. Pop., 2,500,000. The chief town of the Vassal state of Bokhara has a population of about 75,000.

Bokhara, 11, 26.

Conquest of, 11, 26.

Boleyn, Anne, 10, 301.

Bolingbroke, 14, 23.

Bolivar.—(1783–1830.) Simon Bolivar was born at Caracas, the capital of Venezuela. His parents were of noble family, and had large estates, but they did not live after their son had passed from childhood. At about the age of fourteen, he went to Madrid, where he paid some attention to the study of law. He also visited France and Italy. In 1809 he returned to Caracas, stopping in the United States on the way.

He took part in the revolt in Caracas which begun in 1810. He received a colonel's commission and was sent to get aid from England. A year later he was governor of a strong seaport town (Puerto Cabello) which was the chief depot of the "patriots." After the earthquake of 1812, the royalists gained and obtained control of the city.

For a while Bolivar retired to his estates; but he soon entered the service of the "patriots" of New Grenada. He undertook an expedition against the Spaniards, and gained public notice by the success of his bold exploit. He was promoted, and obtained consent to march against the royalists in Venezuela. With a small force of about five hundred men he boldly crossed the frontier. It seemed to be a rash act; but the people of the country rose in arms and flocked to his banner. After

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several successful battles, he defeated the Spanish forces under Monteverde and finally entered Caracas in triumph (Aug. 4, 1813) where he soon received the powers of a dictator.

In the desperate contest that followed, between the royalist and patriot forces, he was defeated, and compelled to retreat. He had not the resources to carry out his bold plans. Once more he returned to New Grenada, where he received the praise of the congress. He was intrusted with an expedition against Santa Fé de Bogotá which soon surrendered to him.

Later, a private enmity, between himself and the governor of Carthagera, led to unfortunate strife, which caused Bolivar to give up his command and retire to Jamaica. He claimed that his retirement was with a desire to secure harmony in the patriot forces. He remained in Jamaica while Morillo, the royalist general, was reducing Carthagera and over-running New Grenada.

In May, 1816, he returned with a force which he had raised in Haiti. He was defeated by Morillo, but he was not conquered. Going to Barcelona, he organized a government of the province and gathered forces by which he won in a desperate conflict against Morillo. He went on in his career of victory, and in February, 1819, called a congress (on the Orinoco) which gave him the executive power, with the title of "Provisional President of Venezuela." In March, he reorganized his forces, and marched to join the patriots in New Grenada. After two smaller battles he gained a great victory at Boyacá, by which he secured possession of Santa Fé and all of New Grenada. He called a congress by which he was appointed President and Captain-general of the Republic. With new troops and supplies he returned to Venezuela, quieted party dissension, and called a general convention by which Venezuela and New Grenada were united under the name of the Republic of Colombia.

Boliver was made President of the united republics. He soon took the field again at the head of a large force, and in 1821 he closed the war in Venezuela by an important victory over the Spaniards at Carabobo. He was received with great joy by Caracas, which he had for the third time rescued from oppression.

Taking the lead of the liberating army, he went to assist Quito and Peru. In June, 1822, he drove the Spaniards from Quito and in January, 1823, he reached Lima amid the shouts of the people, who made him Dictator of Peru with supreme power. In 1825, he was

declared perpetual protector of Bolivia, which was formed from upper Peru. About this time he proposed the well-known congress of Panama to secure a stable alliance between all of the American states. In May, 1826, he presented to the Bolivian congress his plan of a constitution and a government. His code was adopted, and he was made President, and invested with great power. Many in Buenos and Chile began to fear an invasion by him and others in Peru accused him of a design to unite that republic permanently with Colombia and Bolivia and to make himself perpetual dictator.

In September, 1826, he left Lima for Colombia, where his presence was necessary to settle internal division and strife. In January, 1827, in order to repel the accusation that he had designs to secure the dictatorship of Colombia he wrote from Caracas, stating his intention to resign from the presidency and retire to his estates; but the congress after much discussion refused to accept his resignation.

Meantime a speedy revolution had occurred in Peru. In December, 1826, when the Bolivian code became the constitution of Peru, Bolivar was pronounced President for life. The Colombian troops quartered at Lima, fearing that he was getting ready to overthrow the Colombian constitution, planned a revolt by which the Bolivian code was thrown aside, and a new government organized.

In March, 1828, Bolivar opened the proceedings of a general convention which met at Ocana to revise the Colombian constitution. He urged that the president should have greater power, in order to prevent internal troubles. The convention was suspicious of the President's intentions; but, after it closed its sittings, a meeting of the principal civil and military residents was held at Bogotá, and Bolivar was invested with great power as Supreme Chief of Colombia. A few days later, he made a solemn entry into Bogotá and assumed the supreme power. He soon found that there was a strong opposition to him, especially shown in the case of Venezuela which decided to secede.

Notwithstanding the jealousy and distrust of rival factions, he continued to act as the chief authority until May, 1830, when he resolved to retire. Many urged him to resume the government, but he held to his purpose, and went to Carthagera, exhausted both in body and mind. He died December 17, 1830, but his name will not soon be forgotten.

Bolivar, coin of Venezuela, 13, 155.

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Bolivia.—A republic in western South America, named in honor of Simon Bolivar, who wrested it from Spain in 1825. In the north are the extensive plains of the Madëira; in the southeast is the Gran Chaco, imperfectly explored, often inundated, and the home of many uncivilized Indians. The western plateau is crossed by the Andes. Wholly within the tropics, Bolivia, nevertheless, in consequence of the diversity of its physical features, has all the climates of the world, each with the vegetation peculiar to itself. Lying between the Andes and Brazil, it and Paraguay are the only two countries of S. A. which have no seacoast. The forests yield rich cabinet, dye and building woods, cinchona, and India-rubber. Rich in the variety of its minerals, its silver mines alone have produced \$3,000,000,000, and appear even now to be inexhaustible. There are large deposits of gold, lead, tin, salt, sulphur, niter, and copper. Bolivia is composed of 9 departments, with a president, two houses of Congress, and a constitution resembling that of the U. S. It has had many revolutions, and sided with Peru in the war with Chile, 1879-83. The latter triumphed and annexed the western seacoast, including the Bolivian niter beds. A treaty of peace and amity in which the rights of neutrals were defined, was concluded with the U. S. in 1858. Area, 567,271 sq. miles; pop., exclusive of Indians, 1,300,000. La Paz is the capital. (Pop., 62,320.)

Boliviano, 13, 155.

Bolles, Alfred F., on "Business Chances," 13, 67.

Bollman case, 11, 218.

Bologna.—1. A province of Italy; area, 1,448 square miles. 2. The capital of the province of Bologna; originally an Etruscan town and later a Roman colony. In the 16th and 17th centuries a noted Italian art center. United to the kingdom of Italy in 1860. Estimated pop. (1899), 158,957.

Bombay.—A city on an island of the same name in the W. of Hindustan, or British India. Pop., 821,764. Also, a province or presidency; area, 125,144 sq. miles; pop., 18,901,123, besides tributary states.

Bomford, George, 11, 218.

Bonaparte, Charles J., 12, 180.

Bonaparte, Jerome, 14, 79.

Bonaparte, Josephine, 10, 422.

Bonaparte, Napoleon, 14, 119, 157.

Bonaparte's gull, 4, 218.

Bond, 13, 38.

Bottomry, 13, 54.

Bond, George Phillips.—Born at Dorchester,

Mass., 1825; died at Cambridge, Mass., 1865. An American astronomer and director of the observatory of Harvard University. He wrote "On the Construction of the Rings of Saturn," etc.

Bond, William Cranch.—Born at Portland, Me., 1789; died at Cambridge, Mass., 1859. An American astronomer; he superintended the erection of the Harvard observatory, of which he became the director. He was noted for his observation of the rings of Saturn and for his work in celestial photography.

Bond Street.—A leading London thoroughfare, once a fashionable promenade, but now a part of the business district.

Bonded Warehouse, 13, 38.

Bones of the ankle-joint, 1, 274.

arm, 1, 273.

Chest or thorax, 1, 273.

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wrist, 1, 273.

Bone-black, Properties of, 5, 176.

Boneset, 5, 36.

Bonhomme Richard, 11, 71.

Boniface VIII., Pope, 10, 265.

Bonito, 4, 289.

Bonn.—A city of Prussia, situated near Cologne, on the Rhine. In former times a Roman fortress. It contains an interesting cathedral and a notable university; and is also noted as being the birthplace of Beethoven. Pop. (1890), 39,805.

Bonnat (*bo-nä'*), **Léon Joseph Florentin.**—Born, 1833. A noted French painter, distinguished especially in his portrait work.

Bonner, Robert.—(1824-1899.) An American publisher; founder of the "New York Ledger." A fancier of fine horses.

Bonneville, Benjamin L. E., 11, 455.

Bonny Castle.—The home of Josiah G. Holland, one of the picturesque Thousand Islands, in the St. Lawrence River; from it came the title of one of his stories—"Arthur Bonnicastle."

Bonus, 13, 38.

Bonus bill, 11, 341.

Book-cases as furniture, 1, 115.

Book-covers, Women as designers of, 7, 401.

Book-keepers in the civil service, 13, 360.

Book-keeping a good stepping-stone, 13, 6.

Book-keeping, Books used in, 13, 39.

Double entry, 13, 44.

Principles of, 13, 38.

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 18 mo., 13, 151.
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 Small, 13, 158; 14, 211.
 Worship of, 3, 7.
Book-type, Smaller sizes of, 13, 157.
Boone, Daniel, 11, 218.
Boonville, or Booneville.—A city in Mo. where the Confederates under Gen. Marmaduke were defeated by the Federals under Gen. Lyon, June 17, 1861. Pop. (1900), 4,377.
Boonville (Mo.), Battle of, 11, 455.
Bootes, the bear-driver, a constellation, 5, 146.
Booth, Edwin Thomas.—Born at Bel Air, Md., 1833; died in New York City, 1893. A noted American tragedian. His first appearance as a "star" was at Boston, as "Sir Giles Overreach." In 1861, he went to London and played an engagement there. After the assassination of President Lincoln by his brother, John Wilkes Booth, he retired temporarily from the stage and never again played in Washington. He reappeared as Hamlet, in New York in 1866, and acted in Shakespear-ean plays at the Winter Garden Theater until its destruction by fire in 1867. He then erected a theater of his own, which proved a financial failure. His last appearance was in Brooklyn in the part of Hamlet. In 1888 he founded in New York, "The Players," a club designed for social intercourse between the dramatic and kindred professions.
Booth, John Wilkes, 12, 240.
Booth, Junius Brutus.—Born at London, 1796; died on a Mississippi steamboat, 1852. An Anglo-American actor. His career, though brilliant, was erratic, and his rivalry with Kram, whom he somewhat resembled, led to exciting incidents in the Covent Garden Theater, London, that resulted in his departure for America, where he played with great success. In 1822 he bought a farm in Harford County, Md., where his family lived and to which he retired when at leisure.
Borax is the biborate of soda. It occurs native on the shores of certain lakes in Thibet and Persia. It is also found in South America, California, Ceylon, India, and China. It is much used in soldering, brazing, and casting.
Borax, 5, 198.
Bordeaux.—The third city of France, capital of the Gironde. It has a fine harbor and extensive commercial interests. Pop. (1896), 256,906.
Bordeaux, States, 11, 456.
Boreas.—The personification of the north wind; son of Astræus and Eos.
Borghese.—A family of marked distinction in Sienna and later in Rome. Camillo Borghese became Pope Paul V. (1605), and Camilla Filippo Ludovico Borghese (1775-1832) became closely associated with Napoleon.
Borgia, Lucrezia.—(1480-1519.) Daughter of Pope Alexander VI. and sister of Cesare Borgia, Duchess of Ferrara. Accused of many crimes, but largely vindicated by modern writers.
Boric acid, 5, 198.
 an antiseptic, 1, 359.
Borneo.—Excluding Australia, now classed as a continent. Borneo is the second largest island in the world, having an area of 285,000 sq. miles and a population of 1,750,000, composed of Dyaks, Malays, Negritos, Bugis, Chinese, and Dutch. Borneo, which is situated in the Indian Ocean, is mountainous, has a very rich soil and produces many of the costlier woods and fine spices. The elephant, rhinoceros, tapir, and birds of brilliant plumage abound. The Dutch are the rulers, although British interests are important. A treaty concerning the trade relations of the U. S. and Borneo was concluded with Holland in 1850.
Borodino.—A village in Moskva, Russia. It was the scene of a great battle between the Russians and the French under Napoleon, Sept. 7, 1812, involving a loss of life in both armies of 80,000 men. The orderly retreat of the Russians caused them to regard it as a victory; but Napoleon pushed on unhindered to Moscow, which city he entered Sept. 14, to find it in flames.
Boron, Properties of, 5, 198.
Borrioboola-gha.—In Dickens's "Bleak House"; the imaginary place in Africa, to which Mrs. Jellyby directed her missionary efforts.
Bosio, Francis Joseph, 9, 400.
Bosnia.—A province of the Ottoman empire, occupied and governed by Austria since 1878.

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- It now includes Herzegovina and the Turkish parts of Dalmatia and Croatia. It touches the Adriatic Sea at a few points. The population is made up of Christians, Moslems, and Jews, and is 1,148,517.
- Bosnia, Revolt of**, 11, 11.
- Bosporus**.—A strait connecting the Black Sea and the Sea of Marmora, and separating Europe from Asia. In length, 18 miles.
- Bossut, Charles**.—(1730-1814.) A noted French mathematician.
- Boston**.—The capital of Mass. It is the largest city in New England and one of the chief commercial cities and literary centers in the country. Its foreign and coasting trade is large, as it is the terminus of many railroads and foreign and coastwise steamship lines. It was at first named Trimountain, from the three summits of Beacon Hill, and later received its present name in honor of Rev. John Cotton, who came from Boston in Lincolnshire, England. It expelled Governor Andros in 1689; was involved in the witchcraft delusion in 1692; was the scene of the "Boston Massacre" in 1770, and of the "Boston Tea-party" in 1773. It was besieged by the American army under Washington (1775-76), and was evacuated by the British, Mar. 17, 1776. It was incorporated as a city in 1822. It has frequently suffered from fires, especially Nov. 9-11, 1872, when the estimated loss was \$80,000,000. Population (1900), 560,892.
- "**Boston**," *The*, 17, 211.
- Boston case**, 11, 341.
- Boston Common**, 11, 218.
- Boston, Evacuation of**, 11, 71.
- Boston Massacre**, 11, 71.
- Boston Port Bill**, 11, 72.
- Boston Tea Party**, 11, 72.
- Boston University**, 11, 274.
- Boswell, James**.—(1740-1795.) The author of the famous "Life of Samuel Johnson," considered the greatest of biographical works.
- Botanical names explained**, 5, 44.
- Botanical specimens**, Box for collecting, 4, 403.
Fastening on paper, 4, 402.
Mounting, 4, 402.
Preparing, 4, 402.
- Botany**, by George Raywood Devitt, 4, 391.
- Botany**, Best books on, 4, 402.
Geographical, 4, 391.
Morphological, 4, 391.
Paleontological, 4, 391.
Physiological, 4, 391.
- Botany Bay**.—An inlet on the eastern coast of New South Wales, Australia, long used by England as a convict station.
Structural, 4, 391.
Systematic, 4, 391.
- Bot-fly**, 4, 351.
- Bothnia, Gulf of**.—The northern arm of the Baltic Sea, lying between Sweden and Finland.
- Bothwell**, 10, 442.
- Botticelli, Sandro**, 9, 220.
- Bottom, Nick**.—A character in Shakespeare's "Midsummer Night's Dream."
- Bottomry bond**, 13, 54.
- Boucher, François**, 9, 264.
- Boucicault, Aristide**, 14, 118.
- Boucicault (bö'sē-kō)**, **Dion**.—Born at Dublin (Ireland), 1822; died at New York, 1890. An Anglo-American dramatist, manager, and actor. His plays include "London Assurance," "Colleen Bawn," "Arrah-na-Pogue," "The Shaughraun," and many others.
- Boudinot, Elias**.—Born at Philadelphia, 1780; died at Burlington, N. J., 1821. An American patriot and philanthropist, president of the Continental Congress in 1782.
- Boughton, George Henry**.—Born, 1834. An English-American painter. Royal academician, 1896.
- Bouguereau (bög-rō)**, **William Adolphe**.—Born, 1825. A noted French painter.
- Boulanger (bö-lon-zhā')**, **Georges Ernest Jean Marie**.—(1837-1891.) A French general and politician.
- Boulanger, General**, 10, 384.
- Boulogne**.—A town in France, five miles W. of Paris.
- Boulogne-sur-Mer**.—A fortified seaport on the English Channel.
- Bourbon**.—The most notable French family. It takes its name from the castle and seigniory of Bourbon in the center of France. The Bourbon dynasty began with Henry IV. who died in 1610 and lasted until the Duke of Orleans' reign as king of the French, from 1830-1848.
- Bourbon kings of France**, 10, 296.
- Bourbons, Restoration of the**, 10, 371.
- Bourdon, Dr.**, 14, 226.
- Bourget, Paul**.—A French novelist and critic. Born, 1852.
- Bourse**.—A board of trade building in European cities; an exchange.
- Bouteloua oligostachya**, 5, 82.
- Boutwell, George Sewall**, 12, 211.
- Bouvines, Battle of**, 10, 265.
- Bowditch, Nathaniel**.—Born at Salem, Mass., 1773; died at Boston, 1838. An American mathematician. He translated Laplace's "Mécanique céleste," and wrote "The New American Practical Navigator."
- Bowdoin College**.—An institution of learning at Brunswick, Me.; it is among the oldest col-

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- leges in the country, having been opened in 1802.
- Bowdoin College**, aid to poor students, 8, 46.
Longfellow's class at, 8, 296.
- Bowdoin, James**.—Born at Boston, Mass., 1727; died there, 1790. An American politician, governor of Mass. (1786-87). He suppressed Shay's rebellion. Bowdoin College, Me., was named in his honor.
- Bowen, Francis**.—Born at Charlestown, Mass., 1811; died at Cambridge, Mass., 1890. An American writer on philosophy and political economy. Was editor and proprietor of the "North American Review," and professor of moral philosophy and civil polity in Harvard University in 1853. His chief works are, "American Political Economy," and "Modern Philosophy."
- Bowery, The**.—A wide thoroughfare in New York. It received its name from the fact that it ran through Peter Stuyvesant's farm or bouwerie. It was at one time noted as a haunt of ruffians, known as the "Bowery Boys."
- Bowie, James**, 11, 341.
- Bowles, Samuel**, 8, 337.
- Bowling**, 6, 47.
- Bowling Green**.—A town in Warren County, Ky. It was an important strategic point during the Civil War, in 1861-62. Pop. (1900), 8,226.
- Bowling Green**.—A small open space in New York, at the foot of Broadway, in the old governmental and aristocratic center of the city.
- Box and Cox**.—A famous comedy, written by John M. Morton.
- Box Elder**, 4, 408.
- Boxer uprising in China**, 10, 163; 11, 31.
- Boxing**, 6, 130.
Educational value of, 6, 19.
- Boxing the compass**, 5, 324.
- Boy and girl friendships**, 2, 197.
Safe relations of, 2, 197.
- Boyesen, Hjalmar Hjorth**.—(1848-1895.) A Norwegian-American novelist and littérateur.
- Boyle's Law**, 5, 252.
- Boylston, Jabdiel**, 11, 54.
- Boyne, Battle of the**, 8, 17; 10, 327.
- Boys Can Do Great Things**, 14, 10.
- Boythorn, Lawrence**.—A character in Dickens's "Bleak House," said to be a portrait of Walter Savage Landor.
- Boz**.—A pseudonym used by Charles Dickens in some of his early sketches.
- Bozman, John Leeds**.—Born at Oxford, Md., 1757; died there, 1823. An American jurist and historian. He wrote a "History of Maryland" and other works.
- Bozzaris, Marcos**.—An illustrious Greek patriot who fell, in 1823, while successfully leading 1,200 men against 4,000 Turco-Albanian troops.
- Brace, Charles Loring**.—Born at Litchfield, Conn., 1826; died in the Tyrol, 1890. An American traveler, author, and philanthropist. He took great interest in the redemption of the criminal and pauper classes in New York City and was the chief founder of the Children's Aid Society in 1853. Besides books of travel he wrote on sociological subjects.
- Brachial plexus**, 1, 285.
- Brachialis anticus muscle**, 1, 275.
- Braddock, Edward**, 11, 54.
- Braddock, William**, 11, 54.
- Braddon, Mary Elizabeth (Mrs. Maxwell)**.—Born, 1837, an eminently popular English novelist.
- Bradford**.—A town in Mass., in Essex Co. on the Merrimac River. It has been annexed to Haverhill since 1890.
- Bradford**.—A city in Pa., in McKean Co. Noted for its oil-production, which exceeds its many other important industries. Pop. (1900), 15,029.
- Bradford, Alden**, 11, 341.
- Bradford, William, the painter**, 9, 331.
- Bradford, William**, 11, 44.
- Bradford, William**, 11, 218.
- Bradlaugh, Charles**.—(1833-1891.) An English agitator. He was editor and lecturer. In 1880 he was elected M. P. for Northampton, but was expelled from the House of Commons for refusing to take the oath, as he was a strong atheist. He appealed to his constituents in 1882 and was reelected; but was not allowed to take his seat. In 1885 he was permitted to do so without being obliged to take the oath.
- Bradlee, Nathaniel**.—(1829-1888.) A prominent architect in Boston, who attracted wide attention by removing large brick buildings bodily.
- Bradley, Edward**.—(1827-1889.) English novel writer and humorist, wrote under the name, "Cuthbert Bede."
- Bradley, Joseph P.**, 12, 211.
- Bradstreet, Anna**, 11, 54.
- Bragg, Braxton**, 11, 456.
- Brahm, the unknown god of the Hindoos**, 10, 4.
- Brahma, An age of**, 10, 7.
and Saraswati, 10, 5.
Breath of, 10, 7.
Day of, 10, 7.
- Brahma fowl**, 4, 106.
- Brahma, how pictured**, 10, 6.
- "Brahma," poem by R. W. Emerson**, 10, 5.
- Brahma, Year of**, 10, 7.

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Brahmaputra.—A river which rises in Tibet and flows into the Bay of Bengal by three mouths, after a course of 1,700 miles.

Brahmin caste, 8, 284.

Brahms, Johannes, 9, 96.

Brain, The, 1, 283.

Divisions of the, 1, 287.

Gray matter, 1, 287.

Growth of the, 1, 286.

Left half larger, 2, 77.

Weight of the, 1, 283.

White matter, 1, 287.

Brainerd, David, 11, 54.

Bramah press, 5, 261.

Bramante Donato Lazzari.—(1444-1514.) One of the most celebrated Italian architects.

Brandenburg.—A province and city of Germany. Berlin is the capital of the province. The city is about 27 miles from Berlin, and has a pop. of 37,817. The province (area 15,381) had a pop. in 1900 of 3,107,951.

Brandon.—The largest grain market in the province of Manitoba in Canada. Pop. (1901), 5,380.

Brandy, Cherry, 4, 47.

Brandy Station (Va.), Battle of, 11, 456.

Brandywine, Battle of, 11, 72.

Brant, Joseph Thayendanega, 11, 72.

Brasidas.—A Spartan general noted for his bravery in the Peloponnesian War. In the battle of Amphipolis he met the Athenian army under Cleon, in B. C. 422. Brasidas and Cleon were both killed, but the army of the latter was almost wholly destroyed.

Brasidas, 10, 200.

Brass, 5, 211.

Brassey, Thomas, railway king, 8, 207.

Brassica Rapa, 5, 78.

Brattle, Thomas, 11, 54.

Brattleboro.—A town in Vt., in Windham Co., on the west side of the Connecticut River, 119 miles from Boston. Pop. (1900), 5,297.

Bray.—A parish in England. "The Vicar of Bray" changed his formal religion three times to hold his position.

Brazil.—The largest and most populous of the South American Republics. It lies on the eastern coast of South America and has an area of 3,218,000 square miles and 18,000,000 inhabitants. It produces more coffee than all other countries combined, and has also gold, diamond, iron, and salt mines. Sugar, tobacco, hides, horns, tallow, rubber, drugs, and dyes are largely exported. The Portuguese settled the country about 1530, and it afterward successively passed under the rule of Spain and Holland. In 1808, the king of Portugal, deprived of his throne by France, took up his

residence in Brazil, which in 1815 became a kingdom. In 1822, a national Congress elected Dom Pedro, eldest son of King João, of Portugal, Perpetual Defender of the newly created kingdom. The complete independence of Brazil was proclaimed later in the same year and Dom Pedro was crowned Constitutional Emperor. He abdicated in favor of his son, Dom Pedro II., in 1831, and the latter monarch reigned until 1889, when he was dethroned. The republic dates from 1891, and Fonseca, Peixoto, Moraes, and Campos Salles have since held the office of president. The Congress consists of a senate and a chamber of deputies. There are 20 states in the republic.

Brazing is brass soldering, and consists in joining together, by means of a solder more or less like brass, two pieces of brass, two of copper, or one of each. The edges are first filed bright to cleanse them, the surfaces are covered with solder and borax and heat applied.

Brazito (Mexico), Battle of, 11, 341.

Brazos.—A river in Texas, one of the largest in the state. It empties into the Gulf of Mexico, about 40 miles west of Galveston, after a course of 900 miles.

Bread, Leavened, 5, 243.

of Iceland, 1, 118.

Italy, 1, 118.

Lapland, 1, 118.

Molucca Islands, 1, 118.

northern Asia, 1, 118.

Sweden, 1, 118.

riots, 11, 341.

Rice, 1, 118.

Salt-rising, 5, 243.

To make, 1, 118.

Wheat, 1, 118.

Bread-making, Chemistry of, 5, 240.

Methods of, 1, 120.

Breakfasts, Formal, 1, 52.

Breastplate of Jewish high-priest, 1, 193.

Breath of Brahma, 10, 7.

Breathing a symptom of disease, 1, 315.

Correct mode of, 8, 449.

Good effects of deep, 1, 294.

Mechanism of, 1, 293.

Value of deep, 6, 16.

Breckenridge, John Cabell, 11, 72.

Breed's Hill, 11, 72.

Battle of, 11, 73.

Bremen.—A German city on the Weser about 50 miles from the mouth, an important commercial and shipping center. Pop., 155,684.

Bremen.—A state of the German Empire; it includes the city of Bremen, its environs and two outlying districts. The city of Bremen is a free city and the second in importance of

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- the German seaports. It was, for a brief period, incorporated with France during the Napoleonic wars, but soon regained its independence and has since been identified with the Germanic Confederation, the North German Confederation, and the German Empire. It joined the Zollverein in 1888. Pop. (1900), 224,697.
- Brennus**, 10, 207.
- Breslau**.—The capital of the province of Silesia, Prussia, ranks second in population among the cities of Germany. Noted for its library of 300,000 volumes, and its cathedral, the spire of which (364 ft.) is the highest in Prussia. Pop. (1900), 422,738.
- Bretagne**, or **Brittany**.—A peninsula in the N. W. of France.
- Breton, Jules Adolphe**.—A distinguished French painter of rural life, was born in 1827. One of his pictures "The First Communion" was sold for \$45,000 in 1886.
- Brewer, David Josiah**, 12, 211.
- Brewery of egg-shells**, Welsh Fairy Tale, 3, 130.
- Brewster, William**, 11, 54.
- Brice, Calvin Steward**, 12, 211.
- Brick house, First, in America**, 1, 223.
- Brick, Size of a**, 13, 158.
- Brick work, Measure of**, 13, 158.
- Bricks**, 5, 442.
- Bridal Veil Fall**.—A noted fall in the Yosemite Valley, Cal. The height of the main fall is 630 feet, and that of the cascades about 300 feet. The total fall, nearly vertical, is about 900 feet.
- Bride, how dressed**, 1, 48.
- Bridesmaids, Duties of**, 1, 47.
- "Bridge of Sighs,"** 10, 277.
- Bridgeman, Frederick Arthur**.—Born at Tuskegee, Ala., 1847. An American genre painter, a pupil of L. Gérôme, resident in Paris. His subjects are chiefly Oriental.
- Bridgeman, Laura**, 2, 374; 8, 290; 12, 212.
- Bridgeman, Laura Dewey**.—Born at Hanover, N. H., 1829; died at South Boston, Mass., 1889. A blind deaf-mute, noted in connection with educational methods for unfortunates of her class. Through scarlet fever she lost sight and hearing and partially the sense of taste and smell, when three years of age. Eventually she became an inmate of the Blind Asylum at South Boston, where she was educated by means of a raised alphabet devised by the principal, Dr. S. G. Howe.—See HOWE, JULIA WARD.
- Bridgeport**.—A city in Conn., situated on an islet of Long Island Sound, and one of the chief manufacturing cities in the state; formerly called Newfield. Pop. (1900), 70,996.
- Bridges, Cantilever**, 5, 419.
Chain, 5, 419.
- Bridges — Continued.**
Longest, in the world, 5, 418.
- Bridgeton**.—The capital of Cumberland County, N. J. It has manufactures of iron, woolens, and glass. Pop. (1900), 13,913.
- Bridgewater**.—A town in Mass.; the seat of the State Normal School. Pop. (1900), 5,806.
- Brier Creek (Ga.), Battle of**, 11, 73.
- Briggs, Charles Augustus**.—Born at New York, 1841. An American theologian. In 1874 he became professor of Hebrew and the cognate languages in Union Theological Seminary, and was one of the editors of the "Presbyterian Review." Owing to advanced views in biblical criticism, he was condemned and suspended for heresy by the general assembly. He has since been ordained a priest of the Episcopal Church (1899).
- Briggs, Charles Frederick**.—Born at Nantucket, Mass., 1804; died at Brooklyn, N. Y., 1877. An American journalist and author. He wrote the novels "Harry Franco; A Tale of the Great Panic," "Trippings of Tom Pepper," etc.
- Bright, Jesse D.**—Born at Norwich, N. Y., 1812; died at Baltimore, Md., 1875. An American politician. He was a Democratic U. S. senator from Ind., and was expelled from the Senate for disloyalty, Feb. 2, 1862.
- Bright, John**.—(1811-1889.) An English statesman, was one of the foremost members of the Anti-Corn Law League. In this movement he was closely allied with Richard Cobden. Though John Bright held office only once in the Cabinet, he wielded more influence in home and foreign affairs than perhaps any other man of his era.
- Bright, John**, 14, 143.
- Bright children**, Danger of forcing, 2, 105.
- Brighton, John**, 14, 95.
- Brill taken by the Dutch**, 10, 299.
- Brindisi** (the ancient Brundisium).—A seaport of Italy of great antiquity. Pop., 14,508.
- Brinton, Daniel Garrison**.—Born in Chester Co., Pa., 1837; died at Atlantic City, N. J., 1899. An American surgeon and ethnologist. His works include "The Myths of the New World," "Aboriginal American Authors and Their Productions."
- Brisbane**.—Capital of Queensland, Australia, is an important seaport. Pop., 93,657.
- Bristed, Charles Astor**.—Born at New York, 1820; died at Washington, 1874. An American author. He wrote "Five Years in an English University," "The Upper Ten Thousand of New York," etc. His pseudonym was "Carl Benson."
- Bristed, John**, 11, 218.

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Bristol.—(1) A town in Hartford Co., Conn. Pop. (1900), 9,643.

(2) A town in Bucks Co., Pa., on the Delaware River. Pop. (1900), 7,104.

(3) A town of Bristol Co., R.I., on Narragansett Bay. Pop. (1900), 6,901.

(4) A city of Sullivan Co., Tenn. Pop., 6,056, with Bristol City, Va. Pop., (1900), 9,850.

(5) An important seaport in England on Bristol Channel. Pop. (1901), 328,842.

Bristow, or Bristoe, Station (Va.), **Battle of**, 11, 457.

Britain conquered by Cæsar, 10, 236.

Invaded by the Angles, 10, 236.

Romans in, 10, 399.

British Empire has great colonial possessions in Asia, Africa, Australia, and North America. The center of the empire is Great Britain and Ireland. The colonies are almost independent and self-governing. Area, 11,335,806 sq. miles; pop., 381,037,874. Capital, London.

British financial influence overthrown by the establishment of a Russian bank in Persia. 11, 26.

government leases Wei-hei-wei, 11, 28.

British Guiana formed, 10, 360.

Britons, Language of the early, 8, 357.

Brittania metal, 5, 211.

"**Brittania**," **The**, 12, 244.

Broad Seal War, 11, 342.

Broadway.—The principal business street of New York, extending from Bowling Green northward to Central Park, for about 5 miles.

Brockton.—A city in Plymouth Co., Mass. It has large manufactures of boots and shoes; formerly called North Bridgewater. Pop. (1900), 40,063.

Brodhead, John Romeyn, 12, 212.

Broderick, David Calbreth, 11, 342.

Broken Arm.—Pull till arms are of the same length. Bind on two splints on opposite sides with handkerchiefs. Newspapers folded make good splints.

Broken Collar-Bone.—Bend the arm over the front of the chest and fasten it in a sling.

Broken Leg.—Pull—do not jerk—on the limb until it is of the same length as the sound one. Place the limb upon a cushion or folded garment; then bind both legs together. Do not move the patient more than is necessary, and then only upon a stretcher. Take great pains that in removing the end of the bone is not forced through the skin.

Broken Ribs.—To reduce the pain caused by motion of the chest in breathing, bind a towel firmly around the chest and fasten it well with safety pins or by sewing.

Broken Thigh.—After steady pulling has made both limbs of the same length, bind both legs together at the knees and at the ankles. Place the patient so that his limbs are bended at the knees.

Broker, 13, 54.

Brokerage, 13, 54.

Brokers, 7, 482.

Bromine, Properties of, 5, 189.

Bronchitis, Treatment of, 1, 327.

Bronco, 4, 13.

Brontë, Charlotte.—(1816-1855.) A well-known English novelist who wrote under the name of "Currer Bell." Her best-known work is "Jane Eyre."

Bronze, 5, 211.

Manganese, 5, 211.

Phosphor, 5, 210.

Silico, 5, 211.

Brooke, Stopford Augustus, Rev.—An eminent English Unitarian minister and literary writer. Was born, 1832, in Dublin. He was a clergyman of the Church of England until 1880 when he became a Unitarian.

Brooke, Stopford, on Ruskin's style, 8, 378.

Brook Farm.—A farm at West Roxbury, near Boston, Mass., and headquarters of the "Brook Farm Association," founded by Ripley, Hawthorne, C. A. Dana, and others, as an experiment in agriculture and education. "Fourierism" was introduced in 1844 and the "Brook Farm Phalanx" was incorporated in 1845. The organization was dissolved in 1847.

Brookline.—A village suburb of Boston, in Norfolk, Co., Mass. Pop. (1900), 19,935.

Brooklyn.—Situated on the western end of Long Island; formerly a separate city, now one of the boroughs of the new municipality of New York. It is called the "City of Churches." It has large docks and basins and contains a U. S. navy yard. It was settled about 1637 and at first called Breukelen. The battle of Long Island was fought on its sight. It was incorporated in 1834. Pop. (1900), 1,166,582.

"**Brooklyn**," **The**, 12, 212.

Brooklyn Bridge.—A suspension bridge, the largest in the world, over the East River, uniting the boroughs of Manhattan and Brooklyn in New York City. It was begun in 1867 and completed in 1884. The bridge crosses the river by a single span, 1,595½ ft. long and 135 ft. above high water level, and is suspended from two massive piers on the opposite sides, which measure 50 by 140 ft. at the water level, and 40 by 120 ft. at the summit, and are 277 ft. high. The total length is 5,989 ft. There are four main cables of steel wire, each 15¾ inches in diameter. The width of the bridge is 85 ft.,

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and is subdivided into two driveways and two railway tracks, between which is a promenade for pedestrians. It was planned and constructed by the Roeblings. A second and similar bridge across the East River—the Williamsburg Bridge—was built to facilitate the enormous traffic between New York City and Brooklyn.

Brooks, Charles Timothy.—Born at Salem, Mass., 1813; died at Newport, R. I., 1883. An American Unitarian clergyman and author, noted chiefly as a translator from the German.

Brooks, James Gordon.—Born at Claverack, N. Y., 1801; died at Albany, N. Y., 1841. An American poet and journalist. He married Mary Elizabeth Aiken (pseudonym, "Norna,") in 1828, and together they published a volume of poems entitled, "The Rivals of Este, and Other Poems."

Brooks, John, 11, 73.

Brooks, Marguerite, on a course of reading for children, 8, 149.

Brooks, Maria Gowen.—Born at Medford, Mass., about 1795; died in Cuba, 1845. An American poet, author of "Zophiël, or the Bride of Seven." She was known as Maria del Occidente, a sobriquet given her by Southey.

Brooks, Phillips, Letters of, 1, 88.
Life of, 8, 284.

Brooks, Preston Smith, 11, 342.

Broom corn, 5, 83.

Brother, Legal duties of a, 13, 308.

Brotherhoods, 12, 212.

Brougham, Henry Lord Brougham and Vaux.—(1778–1868.) A many-sided statesman who will be best remembered as a law reformer.

Brougham, Lord, 14, 242.

Brouwer, Adrian, 9, 299.

Brown, Mrs. A. E., 7, 351.

Brown, Benjamin Gratz, 12, 213.

Brown, Charles Brockden, 11, 218.

Brown, George Loring.—Born, 1814; died, 1889. An American landscape painter.

Brown, Goold.—Born at Providence, R. I., 1791; died at Lynn, Mass., 1857. An American grammarian. He conducted an academy in New York City for many years. He wrote "Institutes of English Grammar," "Grammar of English Grammars."

Brown, Henry Billings, 12, 213.

Brown, Henry Kirke, 9, 412.

Brown, Henry Kirke.—Born, 1814; died, 1886. An American sculptor. His chief productions were an equestrian statue of Washington at New York and of Gen. Scott at Washington.

Brown, Jacob, 11, 218.

Brown, John, 11, 343.

Brown, Dr. John, "Rab," 1, 147.

Brown, Nicholas.—Born at Providence, R. I. 1769; died in 1841. An American merchant, patron of Brown University (formerly Rhode Island College), to which he gave in the aggregate \$100,000.

Brown, Oliver L., on "Rules for success in the insurance business," 13, 143.

Brown, Tarleton, 11, 73.

Brown thrasher, 4, 162.

Brown thrush, 4, 162.

Brown University, aid to poor students, 8, 46.

Browne, Charles Farrar (*pseudonym*, ARTEMUS WARD).—Born at Waterford, Me., 1834; died at Southampton, Eng., 1867. An American humorist. His chief works are "Artemus Ward: His Book," "Artemus Ward: His Travels," "Artemus Ward in London."

Browne, John Ross.—Born in Ireland, 1817; died in Oakland, Cal., 1875. An Irish-American traveler and humorist. Was U. S. minister to China (1868–69). He wrote "Yusef, or the Journey of the Fragi: a Crusade in the East," etc.

Browne, Junius Henri, 11, 457.

Browne, Sir Thomas, 8, 379.

Brownell, Henry Howard.—Born at Providence, R. I., 1820; died at East Hartford, Conn., 1872. A poet. His works include "Poems," "Lyrics of a Day," "War Lyrics and Other Poems," etc.

Brownell, Thomas Church.—Born at Westport, Mass., 1779; died at Hartford, Conn., 1865. A bishop of the Protestant Episcopal Church, and president of Trinity College, Hartford. He was author of "Religion of the Heart and Life," etc.

Browning, Elizabeth Barrett.—(1806–1861.) An English poetess, married Robert Browning in 1846.

Browning, Elizabeth Barrett, 8, 23.

on spiritual interpretation, 2, 186.

Browning, Robert.—(1812–1889.) An English poet. For the study of his works numerous Browning Societies have been formed, both in England and America.

Brownings, Love letters of the, 1, 88.

Browning's style, kaleidoscopic, 8, 383.

Brownlow, William Gannaway, (PARSON), 11, 458; 12, 213.

Brown's Insurrection, 11, 458.

Brownson, Orestes Augustus.—Born at Stockbridge, Vt., 1803; died at Detroit, Mich., 1876. An American journalist and theologian. At first a Presbyterian, he became a Universalist minister in 1825, a Unitarian preacher in 1832, and a Roman Catholic in 1844.

Brownstown (Mich.), Battle of, 1, 219.

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Brownsville.—A city in Cameron County, Tex., bombarded by the Mexicans, May, 1846. Pop. (1900), 6,305.

Brown University.—An institution of learning situated at Providence, R. I., founded in 1764, and until 1804 was known as "Rhode Island College." It is under the control of the Baptists. It has about 900 students and 70 instructors, and a library of 90,000 volumes.

Bruce, Blanche Kelso, 12, 213.

Bruce, Robert, 8, 261.

Bruce, Senator, 14, 198.

Bruges.—In Belgium; the capital of the province of West Flanders. At one time the commercial center of Europe; now noted for its laces. It is the seat of a famous cathedral. Pop. (1899), 53,050.

Brumaire, 13, 97.

Brummel, George Bryan (BEAU BRUMMELL). —(1778-1840.) A famous leader in his day of fashionable society in London.

Brunanburg, 10, 249.

Brunella, 5, 26.

Brunswick.—(1) A town in Cumberland, Co., Me.; the seat of Bowdoin College. Pop. (1900), 2,321. (2) A seaport, the capital of Glynn Co., Ga. It exports lumber, cotton, and naval stores. Pop. (1900), 9,081.

Brush, Charles Francis.—Born at Euclid, O., 1849. An American electrician and inventor of the Brush dynamo-electric machine and the Brush electric arc lamp, both of which are extensively used in the U. S.

Brush, George de Forest.—Born at Shelbyville, Tenn., 1855. An American painter. His best known works are paintings of American Indian subjects. In 1888 he won the Hallgarten prize at the National Acad. exhibition.

Brussels.—The capital of Belgium, on the river Senne and is connected with Antwerp and with the Baltic Sea by the Schelde Canal. Pop. (1899), with its nine suburbs, 570,844.

Brussels carpet, 1, 33.

Brutus, Marcus, 10, 221.

Bryan, William J., 12, 182, 214.

Bryant, William Cullen, 8, 314.

Bryn Mawr, aid to students, 8, 50.

Bubbles, Play with, 2, 129.

Bucentaur was a galley about 100 feet long by 21 feet wide, propelled by 32 banks of oars manned by 168 rowers. It was once a year used by the Doge of Venice when he married the Adriatic.

Bucephalus.—The name of the favorite war-horse of Alexander the Great. He died during Alexander's Indian expedition, and the town of Bucephalia on the Hydaspes marks the place where he was buried.

Bucephalus, 4, 12.

Buchanan, Franklin T., 11, 458.

Buchanan, James, 11, 325.

Bucharest.—The chief city of Wallachia, Rumania, has the reputation of being the most dissolute capital in Europe on account of its numerous cafés and gaming-tables. Pop. (1899), 282,071.

Buck, Dudley.—Born at Hartford, Conn., 1839. An American composer and organist. Has written cantatas, church music, etc.

Bucket shops, Warning against, 13, 195.

Buckeye, Ohio, 4, 452.

Purple, 4, 452.

Red, 4, 452.

Sweet, 4, 452.

Buckingham Palace.—In St. James's Park, London. The city residence of royalty. It was settled upon Queen Charlotte, 1775, by an act of Parliament; was remodeled by George IV., and added to by the late Queen Victoria.

Buckner, Simon Bolivar, 11, 458; 12, 219.

Buckshot war, 11, 350.

Buckwheat, 5, 53.

Yield in the United States, 5, 53.

Bucyrus.—A town in Ohio, Crawford County, noted for the discovery there of the skeleton of a mastodon. Pop. (1900), 6,560.

Buda.—A city, forming with Pesth, the capital of Hungary. It is situated on the banks of the Danube. The chief industry is wine production, its chief product being the *Ofen-erwein*. Pop. (1896), 600,000.

Budd, Katherine C., architect, on women in business, 7, 438.

Buddha legend, 3, 345.

Buddhism, 10, 44.

Buell, Don Carlos, 11, 459.

Buena Vista (Mexico), Battle of, 11, 350.

Buenos Ayres (*bwa'nōs i'rez*).—The capital of the Argentine Confederation in South America, is the first city of S. A. in size, is situated on the La Plata; pop., 556,934.

Buffalo.—A port of entry on Lake Erie, the chief city of Erie Co., N. Y., and the second city in the state. It has a good harbor protected by breakwaters, is the terminus of the Erie Canal, and is an important railway center. It has a large trade in grain, live stock, lumber, coal, cement, and salt and also manufactures of flour, iron, steel, oil, leather, etc. It was founded in 1801 and incorporated as a city in 1832. In 1892 it was the scene of extensive railroad strikes. Pop. (1900), 352,387. The Pan-American Exposition, in 1901, was held there.

Buffalo, Cape, 4, 40.

Buffalo (N. Y.), Destruction of, 11, 219.

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- Buffalo, The**, 4, 37.
Buffalo Bill, 12, 239.
Buffalo robes, 4, 39.
Buffalo wallow, 4, 38.
 Water, of the Philippines, 4, 40.
Buffaloes, True, 4, 40.
Buford, Napoleon Bonaparte, 11, 463.
Bug, Potato, 4, 349.
Bugs, 4, 358.
 Chinch, 4, 358.
 Phylloxera, 4, 358.
 Squash-bug, 4, 358.
Builder and Contractor, 13, 415.
Building and Loan Associations, 13, 55.
 societies, 13, 377.
Buildings, High,
 Eiffel Tower, Paris, 1,000 feet.
 Washington Monument, 555 feet.
 City Hall, Phila., 535 feet.
 Cathedral of Cologne, 511 feet.
 Cathedral of St. Stephen, Vienna, 470 feet.
 Cathedral at Strasburg, 468 feet.
 St. Martin's Church, Landshut, 463 feet.
 Chimney at Glasgow, 460 feet.
 Great Pyramid of Cheops, 450 feet.
 St. Peter's Cathedral at Rome, 448 feet.
 King Shafra's Pyramid, 447½ feet.
 St. Paul's Cathedral, London, 404 feet.
 Torazzo Tower, Cremona, 396 feet.
 Florence Cathedral, Italy, 387 feet.
 Cathedral at Fribourg, Switzerland, 386 feet.
 Amiens' Cathedral, 383 feet.
 Aqueduct delle Torre, Spoleto, Italy, 380 feet.
 Hôtel de Ville, Brussels, 364 feet.
 Cathedral at Milan, Italy, 360 feet.
 Victoria Tower, Westminster, 340 feet.
 Bartholdi Statue, New York, 329 feet.
 St. Patrick's Cathedral, New York, 328 feet.
 Dashur Pyramid, Egypt, 326½ feet.
 St. Mark's, Venice, 323 feet.
 Norwich Cathedral, England, 315 feet.
 Lincoln Cathedral, England, 300 feet.
 Belfry Tower, Bruges, Belgium, 290 feet.
 Trinity Church, New York, 284 feet.
 St. Botolph's, Boston, England, 282 feet.
 Pantheon, Paris, 258 feet.
 Monument, London, 240 feet.
 Canterbury Cathedral, England, 235 feet.
 Masonic Temple, Philadelphia, 230 feet.
 Bunker Hill Monument, Boston, 221 feet.
 Mosque of St. Sophia, Constantinople, 182 feet.
 Albert Memorial, London, 180 feet.
 Leaning Tower of Pisa, 179 feet.
 Tower of Chicago Waterworks, 175 feet.
- Buildings, High—Continued.**
 Arc de Triomphe, Paris, 162 feet.
 Trajan's Column, Rome, 127½ feet.
 High Bridge, New York, 116 feet.
 Pompey's Pillar, Alexandria, 100 feet.
 Cleopatra's Needle, New York, 68 feet.
Bulb Roots, Use of, 5, 45.
Bulgaria.—An independent European principality, on the Balkan Peninsula, composed of Bulgaria as organized in 1878 and Eastern Rumelia. It is a constitutional monarchy; Sofia is the capital. Area, 37,860 sq. m.; pop., 3,733,000.
Bulgaria, Kingdom of, created, 11, 12.
Bull, 13, 55.
Bull.—A term applied in the stock market to one who buys with the expectation of an advance in prices.
Bull, John.—(1563-1628.) (1) An English composer and organist. (2) The personification of the English nation.
Bull, Ole Bornemann.—(1810-1880.) A Norwegian violinist and musical composer of world-fame. He made five visits to America professionally.
Bull-dog, 4, 22.
Bull-head, 4, 306.
Bull-pout, 4, 306.
Bull Run (Va.), Battle of, 11, 463.
Bull, Story of the Terrible, A Hindoo Fable, 3, 171.
Bull Terrier, 4, 22.
Bullion, 13, 55.
Bullock's Heart, 4, 475.
Bullock's Lungwort, 5, 17.
Bullying, Treatment of, 2, 269.
Bulow, Hans von, 1, 239.
Bulrushes, 5, 54.
Bulwer-Clayton Treaty, 11, 350.
Bulwer-Lytton, Edward George Earle Lytton (1805-1873), was distinguished as a writer and politician.
Bulwer-Lytton, Edward Robert Lytton.—(1831-1891.) A son of the novelist, was a writer of poems and prose under the name of "Owen Meredith." Governor-general of India (1878-80).
Bulwer, Sir Henry, Lytton Earle, G. C. B.—English diplomatist and author. In 1849 he concluded the Clayton-Bulwer Treaty.
Buncombe, 11, 351.
Bunker Hill, Battle of, 11, 73.
 Monument, 11, 73.
Bunner, Henry Cuyler.—Born at Oswego, N. Y., 1855; died at Nutley, N. J., 1896. An American writer and editor of "Puck." He wrote "Airs from Arcady," "Zadoc Pine and Other Stories," "The Midge," "Short Sixes."

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- Bunsen, Robert Wilhelm.**—(1811–) A famous German chemist, who invented the magnesium light, photometer, and gas-burner and made the discovery of spectrum analysis.
- Bunting, Indigo, 4, 190.**
Painted, 4, 190.
- Bunyan, John.**—(1628–1688.) An English clergyman and writer, much persecuted for his religious belief. His greatest work is "The Pilgrim's Progress," a part of which was written during imprisonment.
- Bunyan, John, 14, 25, 96.**
Style of, 8, 375.
- Burbage, James.**—Died, 1597. An English actor, and builder of the first theatre in London (1576–77).
- Burbage, Richard.**—(1567–1619.) A noted English actor, son of James Burbage. He was especially distinguished as a tragedian, and in all probability was the original Hamlet, Lear, and Othello. His fame was gained in the old Blackfriars and Globe theatres.
- Burchard, Samuel Dickinson, 12, 219.**
- Burd, William, 11, 54.**
- Burden, Henry.**—Born at Dunblane, Scotland, 1791; died at Troy, N. Y., 1871. A Scotch-American inventor. His inventions include a cultivator, the hook-headed railway spike, and a machine for making horseshoes.
- Burdette, Robert Jones.**—Born at Greensborough, Pa., 1844. An American journalist and humorist. He was for many years editor of the Burlington (Iowa) "Hawkeye," and he became widely known as the "Hawkeye Man." As a lecturer he was a favorite of the American people.
- Burdock, 5, 54.**
- Burgess, Edward.**—Born at West Sandwich, Mass., 1848; died at Boston, Mass., 1891. A noted American designer of yachts. He was the designer of the sloop "Puritan," which beat the English cutter "Genesta" in 1885; of the "Mayflower," which beat the "Galatea" in 1886, and of the "Volunteer," which beat the English "Thistle" in 1887.
- Burgesses, House of, 11, 74.**
- Burgomaster gull, 4, 217.**
- Burgoyne, John, 11, 74.**
- Burgundians, 10, 242.**
- Burgundy.**—The name of a once independent kingdom, now divided between the departments of Yonne, Saône-et-Loire, and Côte-d'Or. The Burgundy wines are the produce of the vineyards of Côte-d'Or, and rank as the finest in the world.
- Burke, Adams, 11, 74.**
- Burke, Edmund.**—(1729–1797.) A noted English statesman and essayist. His attitude toward the American colonies was one of conciliation and justice. His connection with the trial of Warren Hastings amply sustained his reputation as an orator and jurist.
- Burke, Edmund, 11, 74; 14, 150, 279.**
- Burke, John Daly.**—Died near Campbell's Bridge, Va., 1808. An Irish-American historian. He was killed by Felix Coquebert in a duel growing out of a political dispute. He wrote "History of Virginia from Its First Settlement to 1804."
- Burlap as a wall decoration, 1, 11.**
- Burleigh, William Henry.**—Born at Woodstock, Conn., 1812; died at Brooklyn, N. Y., 1871. An American poet, journalist, and abolitionist.
- Burlingham, Anson, 12, 220.**
- Burlington.**—(1) The capital of Des Moines County, Iowa; an important railway center, and has large and varied manufactures; pop. (1900), 23,201. (2) A city and port of entry in Vt., situated on Lake Champlain; has a large trade in lumber and is the seat of the University of Vermont; pop. (1900), 18,640. (3) A city and port of entry in N. J., situated on the Delaware River; it was bombarded by the British in 1776; pop. (1900), 7,392.
- Burma.**—A division of British India occupying a part of the Indo-Chinese Peninsula. It is divided into Upper and Lower Burma. The principal river is the Irrawaddy. The capital is Mandalay, and is situated 3 miles from the Irrawaddy. Pop., 9,250,000.
- Burma, War with the king of, 11, 15.**
- Burnaby, Col. Frederick.**—(1848–1885.) A gallant English soldier noted for his physical superiority. His "Ride to Khiva" is an account of his journey through hostile Russia. He was killed in the Sudan.
- Burne-Jones, Sir Edward.**—(1833–1898.) An English painter, an associate of the Royal Academy, was made a baronet in 1894. He assisted in painting the Arthurian legends at Oxford.
- Burnett, Frances Hodgson.**—Born at Manchester, Eng., 1849. An English-American novelist, author of "That Lass o' Lowrie's," "Haworth's," "Louisiana," "A Fair Barbarian," "Little Lord Fauntleroy," "The One I Knew Best of All," etc.
- Burnett, Frances Hodgson, quoted on lace, 1, 182.**
- Burney, Frances (MADAME D'ARBLAY).**—(1752–1840.) A noted English novelist.
- Burning glasses, 5, 300.**
- Burns, Robert.**—(1759–1796.) Scotland's great lyric poet, was the son of humble parents. His poetical works brought him social dis-

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- tion, which subjected him to temptations to which he unfortunately yielded. He is preëminently the poet of the peasantry and humbler classes.'
- Burns, Robert**, 14, 113.
- Burns and Scalds**.—Soak lint, cotton wool, or waste in oil or oil and lime water and apply to the surface. Run a knife or scissors along the seams of the clothing if it is necessary to remove it.
- Burnside, Ambrose Everett**, 11, 465; 14, 102.
- Burnt Corn Creek (Ala.), Battle of**, 11, 219.
- Burr, Aaron**, 11, 75.
- Burritt, Elihu**.—Surnamed "The Learned Blacksmith." Born at New Britain, Conn., 1811; died there, 1879. A social reformer and linguist, a blacksmith by trade. He advocated the abolition of war, and was the author of "Sparks from the Anvil," "Olive Leaves," "Thoughts and Things at Home and Abroad."
- Burritt, Elihu**, 8, 59; 14, 342.
- Burroughs, George**, 11, 54.
- Burroughs, John**.—Born at Roxbury, N. Y., 1837. An American essayist of nature. He wrote "Wake Robin," "Winter Sunshine," "Birds and Poets," "Fresh Fields," "Signs and Seasons," "Locusts and Wild Honey," etc.
- Burroughs, John**, 14, 145.
- Burroughs, William**, 11, 219.
- Burrowing Owl**, 4, 144.
- Bursar**, 13, 55.
- Burton, Dr.**, 14, 265.
- Buse**, 10, 118.
- Bushel**, 13, 158.
- Winchester, 13, 158.
- Bushmen**.—An African race of degenerated negroes. Their language consists of a number of dialects all marked by a peculiar clicking sound.
- Bushnell, Horace**.—Born at Litchfield, Conn., 1802; died at Hartford, Conn., 1876. A distinguished Congregational clergyman and theologian. His chief works are "God in Christ," "Christ in Theology," "Nature and the Supernatural," "Vicarious Sacrifice," etc.
- Bussey, Benjamin**.—Born at Canton, Mass., 1757; died at Roxbury, near Boston, 1842. An American merchant, founder of the "Bussey Institution," a college of agriculture and horticulture, opened in 1869, in connection with Harvard College.
- Business, List of abbreviations**, 13, 2.
- Business, Lumberman, The**, 13, 406.
- Business Advice**, 7, 440.
- and commerce, 13, 1.
- Baking, by Wilbur E. Cushman, 13, 391.
- Business—Continued.**
- Blacksmith, 13, 420.
- Carpenter, 13, 418.
- chances for young men, 13, 63.
- Civil engineering, by William Barclay Parsons, 13, 401.
- conducted by a married woman, 13, 313.
- Contractor and builder, 13, 415.
- controversies grow out of simple affairs, 13, 122.
- Drifting into, 14, 209.
- Druggist, by John A. Snively, 13, 404.
- Drummer, by Miles E. O'Brien, 13, 374.
- education, Law as a part of, 13, 85.
- Ethics of, 14, 1.
- Evolution of the general store, 13, 379.
- Getting and keeping a position, 13, 70.
- Hardware, by Edward C. Van Glahn, 13, 399.
- Hat manufacture and sale, by A. L. Belden, 13, 396.
- Hotel management, by R. J. Whipple, 13, 410.
- Jewelry by Charles L. Tiffany, 13, 402.
- John Wanamaker's views on, 13, 388.
- Law of, 13, 122.
- Business Law**, Oral agreements, 13, 122.
- Verbal agreements, 13, 122.
- Business man**, Sort of education needed by a, 8, 86.
- management of a newspaper, 8, 464.
- Mechanical engineering, by William E. Welch, 13, 441.
- methods essential, A knowledge of, 7, 440.
- Early education in, 7, 441.
- Mining engineer, by William S. Jones, 13, 444.
- of a bank, 13, 28.
- paper, wrongly spelled names on, 13, 127.
- Preserving, 13, 123.
- Plumber, by J. Madison Heatherton, 13, 421.
- Sailor, by Rudolph Jamasen, 13, 408.
- Selling goods at retail, 13, 385.
- Shoe trade, 13, 393.
- Stationary engineer, 13, 450.
- Successful lawyer should have a knowledge of, 13, 87.
- system, 14, 133.
- Tact in, 14, 197.
- Tailor, by James J. Kennedy, 13, 423.
- Training young men for, by C. C. Gaines, 13, 56.
- Upholstering and interior decoration, by Chandler R. Clifford, 13, 424.
- woman, by Charles A. Conant, 7, 440.
- Butcher-bird, American**, 4, 146.
- Butcher, Derivation of**, 4, 26.

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- Butler.**—The capital of Butler Co., Pa., 30 miles north of Pittsburg. Pop. (1900), 10,853.
- Butler, Benjamin Franklin**, 11, 466; 14, 123.
- Butler, James**, 11, 77.
- Butler, John**, 11, 77.
- Butler, Samuel.**—(1612-1680.) An English poet. Wrote "Hudibras," a mock-heroic poem. He died in great poverty.
- Butler, William Allen.**—Born at Albany, N. Y., 1825. An American lawyer and poet, son of Benjamin Franklin Butler. He wrote "Nothing to Wear, an Episode in City Life," "Two Millions," "General Average," and other poems.
- Butler, William Orlando**, 11, 219.
- Butt**, 13, 219.
- Butte, or Butte City.**—A city in Silver Bow Co., Mont., situated in the heart of the Rocky Mountains. It contains the Anaconda and many other mines, and produces large quantities of gold, silver, and copper. Pop. (1900), 30,470.
- Butter**, 5, 232.
- Buttercup**, 5, 74.
- Butterfield, Daniel**, 11, 467.
- Butterflies**, 4, 338.
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- Butterfly, Archippus**, 4, 340.
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- Butternut**, 4, 453.
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- Butyric Acid**, 5, 231.
- Buxton, Charles**, 14, 267.
- Buxton, Sir Thomas Fowell**, 14, 199.
- Buyers for department stores**, Women as, 7, 411.
- Buzzard, Black**, 4, 138.
 Flight of the turkey, 4, 137.
 often mistaken for the wild turkey, 4, 137.
 Turkey, 4, 136.
- Buzzard's Bay.**—An arm of the Atlantic in the southeast of Mass.
- Bya stone**, 1, 195.
- Byles, Mather**, 11, 77.
- Byrd, William.**—Born at Westover, Va., 1674; died there, 1744. An American lawyer. Was for 37 years a member and finally president of the council of Va. In 1728 he was one of the commissioners appointed to fix the boundary between Va. and N. C., an account of which is contained in the "Westover Manuscripts" written by him.
- Byron, Lord George Gordon.**—(1788-1824.) An eminent English poet. He spent the greater part of his life abroad. Among his most famous works are "Childe Harold," "Don Juan," and "The Prisoner of Chillon." He gave his entire support to the efforts of the Greeks to free themselves from the Turkish yoke. He died at Missolonghi. His body was conveyed to England. It was refused a resting place in Westminster Abbey.
- Byron**, 14, 11.
 Influence of manual training on the life of, 7, 6.
- Byzantine Empire**, or Eastern, or Greek Empire, was founded in 395 A. D. through the division of the Roman Empire into two parts by the Emperor Theodosius the Great. The empire was finally destroyed by the Turks in 1461.
- Byzantine Empire**, 10, 236, 288.

C

Cab.—A term applied usually to a public vehicle, known in England as a "two-wheeler," or "Hansom" (from the name of the inventor), and drawn by one horse. In the hansom, the passenger or hirer of the vehicle sits immediately in rear of the dashboard, the driver sitting on an elevated perch behind, the reins being passed over the top. The term cab is sometimes also applied to a four-seated, closed or open carriage, drawn by one or two horses, the driver sitting in front. The term is also applied to the covered part of a locomotive, in which the engineer and fireman have their stations. The word cab is derived from the *cabriolet*, a light one-horse carriage, with two seats and a calash top. In London, England, the cab or hansom was called the "gondola" of the British metropolis by Disraeli. The number of these licensed vehicles in London is about 24,000, including two and four "wheelers" and hackney coaches.

Cabal'.—A term in use to-day, chiefly among politicians, to designate a small, intriguing, factious party, united for personal or political ends, and sometimes effecting its purpose by unscrupulous, underhand means. The term is, therefore, one of reproach. In this sense, it was applied to the unpopular ministry of Charles II. of England, comprising five members, the initials of whose names—Clifford, Ashley (Shaftesbury), Buckingham, Arlington, and Lauderdale—form the word *Cabal*, and has since been used to stigmatize an odious, intriguing faction.

Cabbage, 5, 54.

Cabet, Étienne.—Born at Dijon, France, 1788; died at St. Louis, Mo., 1856. A French communist who founded a communistic colony in Texas in 1848, which was removed in 1850 to Nauvoo, Ill.

Cabinet, 12, 220.

council, 12, 220.

Cable, Development of the Atlantic, 5, 348.
statistics, 13, 344.

Cable's length, 13, 147.

Cabot, George.—Born at Salem, Mass., 1751; died at Boston, 1823. He was U. S. senator from Mass. (1791-96), and was elected in 1814 president of the Hartford Convention.

Cabot, John.—An Italian navigator who left Italy and entered the service of England. He

sailed from Bristol in 1496 in search of a north-west passage to India; returned within a few months, having discovered Cape Breton Island, and Nova Scotia. In 1498, he made another voyage and reached the coast of Labrador.

Cabot, John, 11, 36.

Cabot, Sebastian.—(1474-1557.) A celebrated explorer, son of John Cabot. He made various voyages in the service of both Spain and England, but finally identified himself with English interests.

Cabot, Sebastian, 11, 36.

Cache (*kash*).—A hiding-place, often a hole in the ground screened by shrubs, for concealing and preserving surplus provisions and other articles cumbrous to carry. The term is used by lumbermen, prospectors, miners, surveyors, hunters, and other travelers in French and western Canada, and in the western portions of the United States. It is derived from the French verb *cacher*, to conceal or hide.

Cactus, 5, 91.

Barbadoes gooseberry, 5, 92.

Cereus, 5, 91.

Edible, 5, 92.

Giant, 5, 92.

Hedgehog thistle, 5, 92.

Indian fig, 5, 92.

Mistletoe, 5, 92.

Old man, 5, 92.

Torch thistle, 5, 92.

Caddo.—A confederacy of North American Indians, formerly inhabiting northwestern La. and Tex. but now removed to the Quapaw reservation, Ind. Ter.

Cade, John (JACK CADE).—Leader of a rebellion, principally of Kentishmen, in the summer of 1450. The rebels were put down within a few days. Cade was killed near Heathfield, Sussex, England.

Cadet, 12, 220.

Cad'illac, Antoine de la Mothe.—Died about 1720. Was the founder of Detroit in 1701 and governor of La. (1711-17).

Cadiz.—A seaport and capital of the province of Cadiz, Spain. It has extensive commercial interests, including the exportation of sherry. It is also a city of much historical interest. Pop. (1897), 70,177.

Cadmeia.—The acropolis of Thebes, Bœotia; so-called in honor of its mythical founder, Cadmus.

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Cadmium.—A white metal, discovered in 1817, closely allied to zinc. It somewhat resembles tin, but is denser, its specific gravity, after fusion, being 8.6. It is soft, but harder than tin, and less so than zinc, and is malleable and ductile, crackling like tin when a rod of it is bent. It takes a luster when polished; its electric conductivity is 22.10, or somewhat lower than that of zinc. It melts at a temperature below redness (315° to 320° C.), and boils at the temperature of 860° C., giving off a vapor of an orange-yellow tint. The best test for cadmium, the production of which is restricted to few localities, is afforded by the color of the deposit formed on charcoal when it is volatilized and oxidized before the blowpipe flame. This is of a reddish-brown color, and usually shows the colors of thin plates from the tenuity of the film; whereas zinc under the same conditions gives a deposit which is bright yellow while hot, but becomes white on cooling. There are alloys of cadmium with various other metals. The only compound of real importance is the sulphide (CdS), which produces several brilliant yellow-orange colors. This is known as cadmium yellow, and is of much value to the artist. For photographic purposes, the iodide of cadmium (CdI) is much used, and is obtained by the action of iodine upon the metal in the presence of water.

Cadmus.—According to Greek legend, son of Agenor, king of Phœnicia; said to be the founder of Thebes, and to have introduced the Greek alphabet.

Cadmus, 10, 87, 186.

Caduceus, 10, 97.

Cæcina, 10, 397.

Caen (*kon*).—The capital of an arrondissement in the department of Calvados, in France. It is situated on the Orne River, at the influx of the Odon, 9 miles from the English Channel and 120 west of Paris. It has considerable manufactures and a large export trade in Caen stone. It has excellent schools, libraries, museums, and a college with faculties in law and science. Its chief buildings, besides the Hotel de Ville, and the Palais de Justice, embrace the cathedral church of St. Pierre, with the finest spire in Normandy, and the interesting old church, the *Abbaye Aux Hommes*, built by William the Conqueror, and in which his remains were interred. Caen was founded by the dukes of Normandy and was strongly fortified by them. It was once the capital of Lower Normandy. It has withstood several sieges, among them that undertaken in 1346 by Edward III. of England. In 1417, it was captured by the English and held by them

until 1459, when it was capitulated to the French, in whose possession it has since continued. Population about 47,000.

Caerleon.—A town in Monmouthshire, Eng., on the river Usk, $3\frac{1}{2}$ miles north of Newport. Historically, the place is of interest, having been a site of Roman occupation, the *Isca Silurum* of Roman dominion, and famous at a later age (the 12th century) as a seat of learning. The British ecclesiastic-historian, Giraldus Cambrensis, gave a lively picture in his day, though somewhat overcolored, of the town's wealth and magnificence. It has also claims to notice in connection with the romance of King Arthur and the Round Table. It was hither the "blameless king" came at Pentecost to be crowned and to hold high festival with the chieftains of his court.

Cæsar and Cleopatra, 10, 395.

Cæsar, Caius Julius, 10, 223; 14, 123.

. Sextius Julius, 10, 226.

Cæsarea.—In ancient geography, a seaport of Palestine, built by Herod I.

Cæsars, The, 10, 226.

Cæsar's influence over his men, 8, 16.

Cæsura, 8, 407.

Caffein, 5, 56, 249.

Caffeine, or **Theine** ($C_8H_{10}N_4O_2$).—The alkaloid or active principle of coffee and tea. It is a white, bitter substance, and when isolated it forms beautiful crystals, which are soluble in water, alcohol, and ether. Medically, it is used as a powerful stimulant of the heart's action, but care should be exercised in its use, as 6 or 8 grains are sufficient to produce delirium. It has strong diuretic properties, and is also used in cases of deficient circulation and uneasy respiration. In single grain doses it gives relief in sick headache. Caffeine forms a series of salts, of which the citrate has come largely into use.

Cahensly agitation, The, 12, 221.

Cain, Auguste, 9, 402.

Cain, Story of, in Arabic legend, 3, 226.

Caine, Thomas Henry Hall.—Born 1853; a leading novelist of England.

Ça ira (*sä ē-rä'*) (Fr., "It will go").—A popular song, set to the music of a country dance,—the tune of *Le Carillon national*,—first sung by the insurgents during the French Revolution of 1789. Marie Antoinette is said to have constantly strummed it on her harpsichord. "Ça ira" was also popular with Lafayette and Franklin during the American Revolution, and it became a rallying cry by the Federalist party, who meant by the phrase that the revolution will *speed*.

Cairngorm, 5, 447.

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Cairo (*kī'rō*).—Capital of Egypt, situate on the right bank of the Nile, and about a mile to the east of that ancient river. The city dates from about 970 A. D., when it was founded by the Fatimite califs and made the capital. It has a considerable transit trade, and is largely visited by tourists and others who come to see the neighboring pyramids. It is a walled town, built on the site of four other cities, and to-day is divided into quarters occupied severally by Jews, Moslems, and Christians. Its chief attractions are its many picturesque mosques, with their beautiful minarets, together with the bazaars, and its interesting medieval art treasures, etc. The older parts of the town and gateways are narrow and are usually thronged with asses, camels, and other beasts of burden, and their drivers. The modern sections are more spacious and have fine boulevards and broad avenues, lined with trees, and flanked by showy villas, especially toward the western suburb of Ismailia. It possesses about 400 mosques, many of them interesting for their beautiful Arabic architecture and rich interior decorations. The more notable of these are the mosques of Amra, of El-Gouri, of El-Azhar, of Akbar, and the mosque of Sultan Hazzan, with its distinctive Mohammedan architecture. There is also the Tomb-Mosque of Kait Bey, which dates from 1470, and the most distinguished bit of architecture in Cairo; besides this there are the Tombs of the Mamelukes, and the Tombs of the Califs. In addition to the Pyramids, the city has another attraction in the Nilometer, a domed monument for measuring the rise of the Nile, constructed about 860 A. D. There is also a university, which dates from 970, and to which about 2,000 students are drawn annually from all parts of the Mohammedan world. Cairo was captured by the Turks in 1517, was held by the French in 1798-1801, and occupied by the British in 1882. Since then it has become the center of British influence in Egypt. The city is under a governat, representing the Khedive, whose State is nominally dependent on Turkey. It has a population of 570,062, of whom about 36,000 are foreigners, the remainder being sedentary Egyptians, with a sprinkling of nomads.

Caius Cæsar, 10, 227.

Caius Licinius Stolo, 10, 212.

Caius Pontius, 10, 213.

Calabash gourā, 5, 60.

Calais (*kā-la'*).—A fortified seaport town of France, in the department of Pas-de-Calais, situated on the Straits of Dover, on the most direct route between London and Paris. It

has a good harbor, and much steamer traffic with the English port of Dover. The town's share of the chief French ports in the trade of 1898 (exports and imports) was estimated at 63 million dollars. Its population is close upon 60,000. It lies 180 miles N. N. E. of Paris. Calais, in 1347, was besieged and taken by the English under Edward III., but was lost in the time of Queen Mary (1558). The Spaniards held it for two years (1596-98).

Calais captured by the English, 10, 266.

Calamus, 5, 54.

Calcium (sym., Ca; atomic weight, 40).—The metal present in chalk, stucco, and other compounds of lime. It is of a pale yellow color, tenacious, and malleable, and is widely disseminated, as in its compounds *calcium carbonate*, chalk, limestone, etc.; *C. sulphate*, plaster of Paris and gypsum; *C. fluoride*, or fluor spar; *C. phosphate*, apatite and the earthy part of bones. Calcium compounds are used to make water hard.

Calcium carbide, 5, 182.

crystal, Form of, 7, 258.

group of chemical elements, 5, 208.

hydrate, 5, 182.

Properties of, 5, 208.

Salts of, 5, 208.

Sources of, 5, 208.

Calcutta.—The capital of Bengal and British India, situated on the Hugli River, a branch of the Ganges, and the chief commercial city in Hindostan. It was founded by the East India Company in 1686, and called by that famous trading corporation (whose governing functions were in 1858 transferred to the British crown) Fort William. Here was the scene of the massacre of the "Black Hole," in June, 1756, an atrocity related by Macaulay in his essay on Lord Clive. Of the 146 English prisoners confined in a close gaol-room over a hot Indian summer night, all but 23 were found dead in the morning, having been suffocated or trampled to death. The city and fort were afterward recaptured by the British, and in 1772 it became the seat of the central government of India. The city has a striking appearance from the river, with its arsenal and dockyards, jetties for ocean-going steamers, its esplanade and embankments with their fine array of buildings, and inland a network of streets, with many stately houses, palaces, and government buildings. Calcutta is the seat of a university, a Sanskrit College, an attractive botanical garden, and the homes of many learned institutions and societies. It has a large inland as well as sea-borne trade, its chief exports being tea, rice, wheat, cotton,

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seeds, jute, and indigo, besides leather, untanned hides, wool, coffee, teak wood, and opium. Pop., with suburbs, about 900,000.

Caldwell.—A town in eastern N. Y., noted as a summer resort and as the former site of Fort George and Fort William Henry, in the 18th century.

Caldwell, Joseph.—Born at Lexington, N. J., 1773; and died at Chapel Hill, N. C., 1835. An American divine and educator who became president of the University of North Carolina in 1804.

Calebee Creek (Ala.), Battle of, 11, 219.

Caledo'nia.—A name applied by the early Roman writers to that part of Britain which lies to the north of the Clyde and the Forth rivers, *i. e.*, to the Highlands of Scotland. Both Pliny and Tacitus refer to the Caledonians, as having sandy hair, living in tents without cities, addicted to predatory warfare, and fighting in chariots. The Roman general Agricola (father-in-law of Tacitus) is said to have first penetrated into Caledonia and in 84 A. D. defeated the Gaelic tribes in the Grampian Hills, under their leader Galgacus. After this, and when Agricola had been recalled to Rome, the Caledonian chieftains repeatedly harassed the Roman colonies in Britain, which caused the Romans to build, in 139 A. D., what is known as Antonine's Wall, extending for over 30 miles from the Firth of Forth to the mouth of the Clyde. Later on (A. D. 208), the Emperor Severus invaded Caledonia in force, but was compelled to retreat southward after an ineffectual and disastrous campaign. Still later (A. D. 367), another Roman general was sent into northern Britain to defend the southern colonies of the island from the troublesome Caledonians and Picts. This enterprise was more favorable to Roman rule. The term Caledonia is in our day only used as a poetical designation of Scotland, as in Sir Walter Scott's lines in "The Lay of the Last Minstrel":—

"Caledonia, stern and wild,
Meet nurse for a poetic child."

Calendar, 10, 90.

Amendment act, 13, 92.

Gregorian, 13, 90, 98.

Jewish, 13, 102.

Julian, 13, 102.

Calhoun, John Caldwell, 11, 352; 14, 177.

Calico.—A fabric of cotton cloth, the name being derived from the city of Calicut, in Madras, where it was first manufactured, and in 1631 brought to England by the East India Company. Calico-printing, an ancient Indian and Chinese art, has become a great industry in

this country and in Britain, as well as in Holland.

Calico Bush, 4, 138.

Cal'icut.—A seaport on the Malabar coast, Madras Presidency, British India, six miles north of Beypur, and 100 miles S. W. of Seringpatam. It was the first port on the Indian Ocean visited by Vasco da Gama, in 1498, and was then a considerable place and had an important trade. This trade however declined greatly, but of late has somewhat revived, as it possesses an excellent roadstead and harbor. In 1509, it repulsed the Portuguese, and defeated and expelled Albuquerque, the Portuguese discoverer and founder of the Portuguese dominions in the East. In 1789 it was destroyed by Tippu Saib, and three years afterward the place was ceded to the British. The city gave its name to calico, through the Portuguese. Pop., 70,000.

California.—One of the Pacific States of the U. S. of America. Bounded on the north by Ore., east by Nev., and Ariz., south by lower Cal., west by the Pacific Ocean. The surface and climate are greatly diversified; it is traversed by the Sierra Nevada and Coast mountain ranges and is famous for its picturesque scenery; contains the Yosemite National Park and the wonderful groves of the gigantic redwood trees. The discovery of gold in the mountains of Cal. caused a great rush of fortune-seekers from the East, in 1849-50; besides the precious metals it produces grain, wool, honey, wine, and enormous quantities of fine fruit. Settled by Spanish missionaries in the 17th century, and became a part of Mex.; at the close of the Mexican War in 1848, it was ceded to the U. S.; admitted to the Union in 1850. Its capital is Sacramento and its chief city, San Francisco; other important cities are Los Angeles, Oakland, Alameda, Berkeley, Eureka, Fresno, San José, and Stockton. Length of the state from north to south, 775 miles; has 57 counties; area, 158,360 sq. miles; pop. (1900), 1,485,053; called the Golden State.

California, University of.—Founded in 1868 at Berkeley, Cal. It is undenominational, and has no students' fees, its maintenance being derived from private bequests and from invested funds, amounting to close upon \$3,000,000. The value of its grounds and buildings is \$1,775,000. It is doing good work for higher education, and has drawn to it a large number of women students, who especially take advantage of the extension courses and the summer session. Its president is Dr. Benjamin Ide Wheeler, and it has a faculty numbering 325 professors and instructors, with a student body,

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- in all departments, of 2,660. Attached to the institution and under the regents is Lick Observatory, on the summit of Mt. Hamilton, in Santa Clara Co., Cal., which has one of the most powerful refracting telescopes in the world. The income for educational purposes of the University is over \$320,000 per annum. It possesses a library of close upon 80,000 volumes. It is understood that Mrs. Phœbe A. Hearst, who has already given the university many gifts and considerable financial aid, is about to erect new buildings for it, at a reputed cost of \$8,000,000.
- California woodpecker**, 4, 178.
- Caligula, Emperor**, 10, 227, 397.
- Caliph Stork**, an Arabian Fairy Tale, 3, 32.
- Caliphs**, 10, 237.
- Call loans**, 13, 105.
- Calla Lily**, 5, 66.
Richardia, 5, 66.
Zantedeschia, 5, 66.
- Callao**.—A fortified town and seaport, with a fine sheltered roadstead, in Peru, on the Pacific Ocean, six miles west of Lima, with which it is connected by rail. The modern town dates only from 1746, for in that year it was destroyed by an earthquake and an invasion of the sea. Much life was lost on the occasion, the number sacrificed being not short of 4,500, while a frigate and a score of other vessels were stranded. The fort, San Felipe Castle, constructed about 1755, was taken from the Spaniards in 1826, and has figured in the later Peruvian wars. The town was bombarded by a Spanish fleet in May, 1866, and was contested by the Chileans in the war with Peru in 1880. Its chief exports are guano, bark, hides, wool, and copper. Population, including the department of Callao, 14 sq. miles in extent, was in 1896, 48,118. At the port of Callao, about 500 vessels of 50 tons and over enter and clear annually, besides about 900 vessels of smaller tonnage.
- Calligraphy**, 13, 105.
- Calling**, 1, 60.
cards, 1, 60.
- Calliope**, 10, 92.
- Callisto**, 10, 89.
- Calls**, Disposal of gentlemen's hats, etc., 1, 63.
First, 1, 62.
when to be returned, 1, 63.
How to properly end, 1, 63.
in person, when demanded, 1, 62.
Morning, 1, 62.
on reception day, 1, 62.
Proper time for, 1, 62.
Sending in cards, 1, 62.
Topics for conversation during, 1, 63.
- Calomel**, 5, 212.
- Calonne**, 10, 342.
- Calumet**.—A town in Houghton Co., Mich., noted for its great copper mines.
- Calvé, Madame** (EMMA DE ROQUER).—Born 1866. A distinguished operatic singer. French and Spanish parentage.
- Calvert, George**, 11, 48.
George, Lord Baltimore, 11, 55.
Leonard, 11, 48.
- Calvin, John**.—(1509-1564.) A famous Protestant reformer and theologian, whose doctrines are held by many Protestant sects. Predestination, particular redemption, and irresistible grace are included in these doctrines.
- Calypso**, a goddess, 3, 382.
- Calyx**, 5, 11.
- Cambrai, Treaty of**, 10, 294.
- Cambray**.—Town and fortress in the north of France. It has long been noted for its manufacture of cambrics. Pop. (1891), about 24,000.
- Cambrian rocks**, 5, 463.
- Cambric**.—A general term applied to the finest and thinnest of linen fabrics, made of linen or flax. Imitations are common of linen cambric, manufactured of fine hardspun cotton, often with figures of various colors, and known as cambric muslin, or cotton cambric. Scotch cambric is a muslin, made of cotton with the fiber twisted very hard, to imitate the real or linen cambric. Some of the finest cambric comes now from Switzerland, though it used to be made largely at Cambray or Cambria in France, whence cambric derived its name.
- Cambridge**.—A city in Mass., considered a suburb of Boston and the seat of Harvard University. It was founded by English colonists in 1630 and called at first Newtown, which name on the founding of Harvard College, was changed to Cambridge. Incorporated as a city in 1846. Pop. (1900), 91,886.
- Cambridge platform**, 11, 55.
- Cambyses** (*kam-bī'sēs*) II.—Son of Cyrus I. According to Xenophon was a king of Persia, though this is doubted by Herodotus.
- Cambyses III**.—529-522 B. C., was king of Persia. He was the son of Cyrus the Great.
- Cambyses**, 10, 188.
- Camden**.—(1) A town in S. C., near the Wateree River, the scene of two victories by the British over the American forces in 1780 and 1781, the first of which is known as the battle of Sander's Creek. Pop. (1900), 2,441. (2) A city and port of entry in N. J., on the Delaware River opposite Philadelphia. Its ship building and manufactures are exten-

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- sive. It is also a great railway center. Pop. (1900), 75,935.
- Camden, Battle of.**—See SANDER'S CREEK, BATTLE OF.
- Camel, 4, 89.**
 Bactrian, 4, 90.
 Characteristics of the, 4, 89.
 Food of the, 4, 90.
 Home of the, 4, 89.
 Stomach of the, 4, 89.
 Transportation by the, 4, 90.
- Camelopard, 4, 93.**
- Cam'elot.**—A location in England, the legendary seat of King Arthur's Court and his knights of the Round Table. Antiquaries differ as to its site, some holding that it was in Somersetshire, near Winchester, on the moors of which great quantities of geese were bred, to which Shakespeare refers in "King Lear;" other authorities assign the site to the region about Camelford, Cornwall, in Wales, where the Duke of Cornwall resided in his castle of Tintagel. Tennyson alludes to Camelot not only in the "Idylls of the King," but in "The Lady of Shalott."
- Camera, Photographic, 5, 301.**
- Cameron, James Donald, 12, 221.**
- Cameron, Simon, 12, 221.**
- Cameroons, or Kameruns.**—A territory on the coast of West Africa, north of French Congo, on the Bight of Biafra, annexed by Germany in 1884. It has a coast line of 200 miles and an area estimated at 191,130 square miles. The native population (about 3,500,000 in all) consists of Bantu negroes near the coast and Sudan negroes inland. The white population does not exceed 450, most of whom are Germans, over whom and the country is placed an imperial governor, assisted by a chancellor, two secretaries, and a local council of three representative merchants, with a German and native military force of about 600. At work in the region are four missionary societies with schools attended by about 5,000 pupils. The colony has a fertile soil, though volcanic in nature, the chief exports being cacao, coffee, cloves and other spices, ivory, palm, caoutchouc, vanilla, and tobacco. The chief town is Kamerun, other trading stations being Buëa, Victoria, Bibundi, Batanga, and Campo. Gold and iron have been found within the territory, whose area was recently adjusted by an agreement at Berlin, which set up the boundary between the Kameruns and the Niger coast protectorate, and gave Germany the command of Benue and access to Lake Chad.
- Camoens, Luiz de.**—(1524-1580.) A celebrated Portuguese poet; author of "The Lusiad," the national epic of Portugal.
- Campagna di Roma.**—A plain in Italy, barren and unhealthy, surrounding Rome. It included the chief part of ancient Latium (the land of the Latins), about 90 miles in length and a breadth of 40 miles. It is a volcanic region, the beds of the lakes being the craters of extinct volcanoes. The river Tiber flows across the plain, between banks of tufa (scoria, or friable volcanic rock), of which the famous seven hills of Rome are composed.
- Campanile of Giotto.**—In Florence, Italy, a famous tower, begun in 1334 by Giotto, a celebrated Italian painter, architect, and sculptor, and completed by Andrea Pisano.
- Campanini, Italo.**—(1846-1896.) A famous Italian tenor singer.
- Campbell, Alexander.**—Born in Ireland in 1788; died at Bethany, W. Va., 1866. A Presbyterian clergyman and founder of the sect "Disciples of Christ" or "Campbellites." In 1809 he came to America, and originated the "Christian Baptist," which was eventually changed into "The Millennial Harbinger" (1830).
- Campbell, Sir Colin, in the Sepoy mutiny, 11, 16.**
 referred to, 14, 86.
- Campbell, Founder of the College for the Blind, 8, 67.**
- Campbell, Dr. Francis Joseph, 8, 28.**
- Campbell, Thomas.**—(1777-1844.) A British poet and miscellaneous writer.
- Campbell's Station.**—A small hamlet in eastern Tenn., where the Confederates under Longstreet were defeated by the Federals commanded by Gen. Burnside, Nov. 16, 1863.
- Camperdown.**—A village in the Netherlands, a few miles from Amsterdam. Off Camperdown, the Dutch fleet under De Winter was defeated by the English fleet under Duncan, 1797.
- Camphor, 4, 484.**
- Camphor tree, 4, 484.**
- Camping, 6, 311.**
 Bedding, 6, 324.
 Camp at Aylesford Lake, 6, 322.
 Camp by the sea, 6, 312.
 itinerant, 6, 313.
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 Camps and their kinds, 6, 318.
 Chup-la-quah-gan, 6, 316.
 Clothing, 6, 324.
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Camping—Continued.

Plague of flies, 6, 328.

Recreation in camp, 6, 329.

Suggestions on the best form of outing, 6, 311.

Tent, 6, 319.

Waterproofing the tent, 6, 321.

Canaan, Land of.—A lowland country or maritime plain, noted in biblical history as the "promised land," and forming part of Palestine. The name is now applied to the whole region lying west of the Jordan, though formerly it comprised the strip of land, from 10 to 15 miles in breadth and 150 miles in length, inclosed between the Jordan and the Mediterranean, and inhabited by the descendants of Canaan, the son of Ham. (See **PAL-ESTINE** or **SYRIA**.)

Canada, Dominion of.—A confederation of British provinces, with a parliamentary government, in which the English monarch is represented by a governor-general. It includes the provinces of Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, Manitoba, British Columbia, and the Northwest Territories. Since the establishment of Confederation, in 1867, and the later absorption of all the continental territory of Great Britain north of the U. S., all branches of industry in the Dominion have greatly advanced, and Manitoba has become world-famous for its wheat. The beef and cattle trade, especially with England, has assumed large proportions. Lumber is of great variety, valuable and abundant. Railroads extend from the principal eastern cities to the Pacific coast, and others with wide ramifications have been built, or are in the course of construction. Much attention is paid to education, especially in Ontario, which has over 5,000 schools and colleges, and most of the nearly 600 newspapers published in Canada, are issued in the same Province. The natural water facilities for transportation, assisted by canals, are unsurpassed by those of any other country, and the merchant shipping of Canada is greater than that of Germany or France. The Dominion is also extremely rich in fisheries and minerals. The organized militia includes all Canadians who are British subjects and are between the ages of 18 and 60. The active militia exceeds 30,000. England usually maintains 12 ships on the North America and West India stations and eight on the Pacific. Canada is separated from the United States by the chain of lakes, the St. Lawrence River, and the 49th parallel of N. Latitude. Its products are those derived from agriculture,

forests, mines, and the sea. Lumber, coal and wheat are the chief exports. The capital of the Dominion is Ottawa, and the largest cities are Montreal, Toronto, and Quebec. Area of Canada, 3,315,647 sq. miles; pop. (1901), 5,338,883.

Canada conference, 11, 467.

Development of, 11, 33.

grouse, 4, 126.

Canadian warbler, 4, 186.

Canal, Chesapeake and Ohio, 5, 402.

Chicago drainage, 5, 400.

China, The Grand, 5, 400.

Erie, 5, 400.

European, 5, 401.

Oldest, in the United States, 5, 402.

Panama, 5, 400.

Suez, 5, 401.

Canals, 5, 400.

Canandaigua Lake.—A lake in western N. Y.; length 15 miles.

taken by the English, 10, 341.

Canary, 4, 168.

as a pet, 1, 136.

Bath for a, 1, 139.

Care of the cage, 1, 137.

Care of claws, 1, 139.

Food for, 1, 137.

Giving medicine to, 1, 139.

Hartz Mountain, 4, 169.

Home of the, 4, 168.

Red, 4, 168.

Teaching to sing, 1, 138.

Wild, 4, 168, 182.

Canary Islands, or Canaries.—A group of islands in the Atlantic lying off the N. W. African coast, belonging to Spain, and ruled as an integral of the kingdom. They were acquired by Spain in the 15th century, the original inhabitants, the Guanches, being now extinct. The chief islands are Teneriffe, Hierro (Ferro), Lanzarote, Fuerteventura, Gran Canaria, Gomera, and Palma, covering an area of about 2,800 square miles. The coasts, as a rule, are steep and rocky, and the islands are of volcanic origin, though eruptions are seldom, and confined only to one of them. The famous peak of Teneriffe is over 12,000 feet in height. Their natural products besides the sweet potato, banana, and many wild flowering plants, are sugar, wine, and cochineal. The inhabitants, whose language is Spanish, are 334,500 in number; the capital is Santa Cruz de Santiago, on the island of Teneriffe.

Canby, Edward Richard Sprigg, 11, 468.

Cancer, the crab, 5, 142.

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Candee, Helen C., on Women and Advertising, 7, 386.

Candelaria, 5, 17.

Candia.—The seaport and former capital of Crete, a Turkish island in the Mediterranean, southeast of Greece, long under Venetian rule. Candia was founded by the Saracens, and in 1669 was taken from Venice by the Turks. The island of Crete has been subject to many insurrections, and in consequence of that the Great European Powers intervened and practically made it an autonomous State, subject to the suzerainty of the Porte. Its High Commissioner is Prince George of Greece, second son of the king of the Hellenes. The island is about 160 miles in length and from 6 to 35 miles in breadth, its area being 3,326 square miles. Its products include wine, oranges, chestnuts, and silk. Candia has a population of 22,500, about that of the capital, Canea.

Candleberry tree, 4, 484.

Candlemas Day, 4, 45; 13, 93, 100.

Candles.—Slender, cylindrical bodies of tallow, wax, paraffin, or other similar fatty matter, inclosing a wick, composed of loosely twisted linen or cotton threads, and used to furnish light. Candles were usually made by repeatedly dipping the wicks in melted tallow, or by casting or running in a mold. Spermaceti is used nowadays for the more expensive kinds of candles, and tallow, palm oil, and paraffin for those in commoner use. Molding is the chief modern method of making candles though dipping is still the common process when tallow is used.

Cane-sugar, 5, 233.

Canis major, a constellation, 5; 141.

Cannæ (*kan'ē*).—In ancient geography, a town of Apulia, Italy, on the river Aufidus (now Ofanto). Here, in 216 B. C., Hannibal, with 50,000 men, defeated a Roman army (86,000 strong) under Æmilius Paulus and Tarentius Varro. The latter Roman consuls precipitated the fighting, but the wary Hannibal so manœuvered his troops that he forced the Romans to front the sun and a fierce wind, which blew the dust in their faces, and in this plight he quickly threw them into confusion and won the battle.

Cannæ, Battle of, 10, 216.

Cannetella, Italian Fairy Tale, 3, 56.

Cannon, First use of, 12, 190.

History of, 5, 381.

Cannon, James G., on "The management of a bank," 13, 28.

Cannon, Joseph G., 12, 221.

Cannon ball, Largest, ever fired, 5, 380.

Cano, Alonzo, 9, 389.

Canoeing, 6, 339.

Canoes, 6, 340.

Instructions for canoeists, 6, 344.

Canoes and Canoeing, 6, 340.

Canongate.—The principal street in the Old Town of Edinburgh; so called from the little burgh of Canongate that formerly surrounded the abbey of Holyrood, founded in the 12th century.

Canova, Antonio, 9, 396.

Cantaloup, 5, 73.

Canterbury.—A city in Kent, England, on the river Stour, historically interesting from Roman and early Saxon times. It lies 56 miles east-southeast of London, and ecclesiastically is the metropolitan See of England. It is noted for its fine cathedral, which dates from 1070 A. D., though as early as the year 600, as a Roman town, it was the See of Augustine, the Benedictine monk, surnamed "the Apostle of the Anglo-Saxons," sent by Pope Gregory I. as missionary to Kent. Augustine was the first archbishop of Canterbury. Besides the cathedral, there are other interesting old churches, such as St. Martin's and St. Dunstan's, and the monastery of St. Augustine. The cathedral is in plan long and narrow, with double transepts, and it contains some fine altar-tombs of early archbishops, besides the tombs of Henry IV. and the Black Prince. The crypt is large and in the early Norman style, and the cloisters are elaborate and picturesque. At the east end of the cathedral is a beautiful circular chapel, called the Corona. The dimensions of the cathedral are 514 feet by 71, the height of the nave-vault being 80 feet, and the central tower 235 feet. The population of the city is about 25,000.

Canterbury Tales, The.—A series of twenty-two tales in verse and two in prose by Chaucer. They are told by twenty-three pilgrims to beguile the time during a tedious journey to the shrine of Thomas à Becket at Canterbury.

Cantharides.—The Greek term for "little flies," and the plural form of the word *cantharis*, a genus of vesicant coleoptera, or blistering beetles, represented by the Spanish fly of southern Europe (*Lytta vesicatoria*). This fly is of a bright green color, is about an inch in length, has a large head and long antennæ, and soft wing-covers conceal the abdomen. The body is covered with whitish hairs, and the insect emits a nauseating odor, besides being a vicious biter and blisterer. Cantharides are collected for medicinal purposes, and when killed by exposing them to the vapor of vinegar, hot water, or turpentine, are afterward

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dried in the sun. A few drops of strong acid is perhaps the best means of preserving them. Blistering flies have long been used in medicine. When applied to the skin, they speedily produce redness and in ten hours or so blister. When swallowed they are an irritant poison. They form the active ingredient of the well-known "fly blister," composed of cantharides mixed with yellow wax, suet, lard, and resin; they are also the chief ingredient of all blistering fluids, and a principal constituent of most stimulant hair-washes.

Cantilever Bridges, 5, 419.

Canton.—A seaport, and one of the chief commercial cities of China, the capital of Kwangtung, situated on the Shu-Kiang or Pearl River, and having a population of about 800,000. A wall, running east and west, separates the old city from the new, while for six miles in circumference it is encircled by a wall 20 feet thick and from 25 to 40 feet in height. Its gates are closed and guarded at night. There are over 600 streets, most of them narrow and crooked, with ancient barricades at either end, and occasional watch-towers from which watchmen at night proclaim the hours and on occasion sound fire-alarms. Many of the natives live on boats and rafts on the river and gain subsistence chiefly by fishing. There are two great and ancient pagodas and about 150 temples and joss-houses, attended by many Buddhist priests and nuns. Over 3,000 ships enter and clear from the port annually, many of them being those of foreign merchants who handle the exports, which are chiefly tea, sugar, silk, and cassia. The chief imports are cotton, wool, and metal goods, food stuffs, opium, kerosene, etc. Canton is one of the leading commercial cities of the country. Founded about 200 B. C., and until 1842, the only Chinese city open to European trade. The early traders to Canton were Dutch and Portuguese, who were followed by those of the East India Co.; and later the trade of the region has been largely in British hands.

Canton taken by English, French, and Americans, 10, 162.

Tartars, 10, 162.

Canute, or **Cnut**, or **Knut**, "**The Great**,"—(994-1035.) A famous king of England, Denmark, and Norway; barbarous and despotic in the earlier years of his reign, but, later, one of the wisest and greatest of rulers.

Canute, 10, 249.

Canvas-back duck, 4, 110.

Caoutchouc (*kii'chiik*), better known as India-rubber or gum elastic, is an exudation obtained

from the stems of many trees grown in tropical regions. As it flows from the trees it is a milky juice or sap, with the color and consistency of thin cream, but it hardens on exposure and becomes the tenacious, elastic substance familiar as India-rubber. It melts at a temperature of 248° Fahr., and if not submitted to a higher heat it resumes its original properties on cooling; when heated it burns with a bright but smoky flame and emits a rather acrid odor. The varieties of caoutchouc are numerous, according to the country from which it comes. It is used largely in commerce and for many varied purposes, as in water-proof cloth, mackintoshes for use in wet weather, overshoes to keep out snow and rain, while its elastic properties make it useful in the manufacture of gusset boots or gaiters. When vulcanized it is turned to an infinite variety of purposes, such as rubber tubing, damp-proofing, fire hose, machine belting, bags, cushions, dolls, door mats, balls, water-proof sheeting, besides buttons, combs, speaking tubes, stethoscopes, portable drinking vessels, etc. It is a pure hydro-carbon, with two qualities, one of which is solid, tenacious, and elastic, and little affected by solvents, heat, or cold; the other is viscid, ductile, and soluble in essential oil and other solvents.

Cape Breton, Canada.—An island situate at the entrance to the Gulf of St. Lawrence, separated from Newfoundland, to the northeast of it, by Cabot Strait, and from the N. E. end of the province of Nova Scotia by the Gut of Canso. It is triangular in shape, its length being about 100 miles, its width 85 miles, and its entire area 3,120 square miles. Its coasts are indented by numerous bays, and by a deep inlet on the east, which extends to the Bras d'Or Lake, and to a ship canal connecting with St. Peter's Bay, on the south coast, practically dividing the island into two parts. The climate is healthy and bracing and the soil, especially along the interior lakes and waterways, fertile. The chief industries are agriculture, coal-mining, and fishing. There is also some export of timber, but the chief output is coal, of excellent quality for steam and other purposes, and of which about a million tons are mined a year. The island is interesting historically, having been occupied early by the French, captured in 1745 by the English, then restored to France again, and once more taken by England in 1758, and finally ceded to that power in 1763, and annexed to the province of Nova Scotia in 1820. The fortress of Louisburg, built by the French in 1713, figured in the Seven Years' War between

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France and England and her colonies; it is now a ruin. Sydney is the capital, and the other chief towns are Arichat, and Port Hood. Incorporated with Nova Scotia 1819. Area, 3,120 square miles. Pop. (1901), 49,166.

Cape Buffalo, 4, 40.

Cape Cod.—A peninsula in Mass., forming Barnstable Co. It was discovered in 1602 by Gosnold. The inhabitants of the peninsula are largely engaged in fisheries.

Cape Horn.—A black, steep, frowning rock, the headland of an island (much dreaded at one time by sailors) at the southern extremity of the Fulgian archipelago. It is said to have been discovered by Sir Francis Drake and to have been doubled in 1616 by two Dutch navigators. Steamers in their passing from the Atlantic to the Pacific now go through the Straits of Magellan, in preference to the route round Cape Horn.

Cape May.—(1) The southernmost point of N. J., at the entrance of Delaware Bay. (2) A city on the above point, a noted seaside summer resort; pop. (1900), 2,257.

Cape May warbler, 4, 186.

Cape of Good Hope (Cape Colony).—The southern promontory of Africa, discovered in 1486 by the Portuguese navigator Diaz, occupied by the Dutch in 1651, abandoned in 1795, and after a brief period of restoration, finally occupied by Britain in 1806, and ceded by the Netherlands in 1814, with other Dutch possessions in South Africa, for the sum of \$30,000,000. In 1853, the government of the colony was established, with Cape Town as the capital; to its area (191,416 sq. miles), have been added east Griqualand, Griqualand west, and other regions; while in 1894 Pondoland, and in 1895 the Crown colony of British Bechuanaland were incorporated with Cape Colony, making a total area of about 277,000 square miles. The population (1891, 1,527,224) is chiefly of mixed race, Kaffirs, Bechuanas, Hottentots, Malays, Fingoes, and whites. Besides the capital the chief towns are Kimberley, the seat of valuable diamond mines, Port Elizabeth, Graham's Town, East London, Beaconsfield, Pearl, and King William's Town. The principal harbor is Table Bay, adjoining Cape Town, where there is a university and the Colonial house of Parliament. The climate and soil are both excellent, the latter yielding wheat, oats, mealies, and Kaffir corn, rye, barley, as well as a variety of fruit and wine-making vines. Its pastoral resources furnish abundant grazing for cattle, horses, sheep, mules, and asses, goats, ostriches, etc; while its mines furnish valuable yields of

gold and copper ores. The colony has 2,500 miles of railway and 8,000 miles of telegraph lines. Capital, Capetown. Pop., with suburbs (1891), 83,898.

Cape of Good Hope acquired by England, 10, 360.

Capella, a star, 5, 136.

Capernaum.—On the Sea of Galilee, not far from the mouth of the Jordan, a village much identified with the life of Christ.

Cape St. Vincent.—A cape projecting into the Atlantic, at the southwestern extremity of Portugal, at which a naval victory was won (Feb. 14, 1797) by a British fleet of 15 vessels under Admiral Jervis (afterward Earl of Vincent) over the Spanish fleet of 27 vessels, 4 of which were captured. The ancient name of the cape was *Promontorium Sacrum*.

Cape Town.—The capital of Cape Colony (Cape of Good Hope), South Africa, and a port on the southwest shore of Table Bay, between the latter and Table Mountain, and beside which rise the tall granite walls of that elevation. Cape Town was founded by the Dutch in 1652 and ceded to Britain early in the past (19th) century. Its port is the chief place of call for steamers and other vessels on the way from Europe to India. It is the see of a bishop of the Church of England. Its chief buildings are the houses of Parliament, composed of a legislative council of 23 members (elected for 7 years) and a house of assembly of 95 members (elected for 5 years). Population (1891), 51,251, or with suburbs, 83, 718.

Cape Verde Islands.—A group of islands belonging to Portugal (14 in number) lying in the Atlantic, west of Cape Verde. The chief islands, which are mountainous and volcanic, are Santiago, Fogo, Brava, São Antão, and São Nicolão, the capital being Porto Praya, or Praia. The islands are administered by a governor, and the population is of mixed race, descended from early Portuguese settlers and negroes of various tribes introduced from Guinea. Its chief products are millet, coffee, and medicinal produce. Over 3,000 vessels visit its port annually. Area, 1,480 square miles; population (1896), chiefly negroes, about 114,130.

Capillaries (derived from *capillus*, Latin for hair) are the minute blood-vessels intermediate between arteries and veins, which assist in the circulation of the blood, and are used also as the smallest lymphatic and billiary vessels. Their use is to subdivide and distribute the blood among all the organs and tissues of the body, and hence aid in its nutrition. They are so fine and minute that they

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can be examined only by the microscope. The capillary movement of the blood in live animals may be witnessed in the wing of a bat, in the tail of the tadpole, or in the web of the frog.

Capillaries, The, 1, 281.

Capillarity is a principle which exercises an important influence upon the circulation of nutritive fluids in both plants and animals. In physics, what is called capillary action or attraction is the peculiar action by which the surface of a liquid, where it is in contact with a solid (as in a capillary tube) is elevated or depressed. Capillarity, in other words, is the result of the relative attraction of the molecules of the liquid for each other and for those of the solid, and may be seen in action, as we have said, in capillary tubes, where the attraction determines the ascent or the descent of the liquid above or below the level of the liquid in which the tube is dipped. The temperature of the tubes and the liquid exercises an important influence upon capillarity.

Capital, Credit as, 13, 110.

Capital of the United States.—Until the adoption of the Constitution, Congress had no fixed abode, but deliberated, as changing conditions dictated, at York, Lancaster, Philadelphia, Baltimore, Princeton, Annapolis, Trenton, or New York. From 1790 to 1800 it met at Philadelphia, and in the latter year removed to Washington, which in 1790 had been selected as the permanent capital of the country. There was a sharp rivalry among several cities to secure the prize of the national capital. Washington was chosen as the result of a combination between the southern members of Congress, who wished it located there, and Alexander Hamilton, who was endeavoring to secure the passage of an act by which the general government should assume the various state debts, incurred for the prosecution of the Revolutionary War, and also for the redemption of the continental script at its face value. The combination was successful in both enterprises; Hamilton's debt bill was passed and the capital was fixed at Washington.

Capital put to the most productive use, 13, 192.

Capitals, Rules for the use of, 13, 105.

Capitol.—The capitol, as the term is generally used in the U. S., unless the building meant is otherwise described, refers to the splendid structure in which Congress holds its sessions at Washington, D. C. The houses in which state and territorial legislatures meet are also designated as capitols. The corner-stone of the original capitol at Washington was laid by

Washington, the first President, Sept. 18, 1793, but the wings were not completed until 1811. The interiors of both were despoiled and burned by the British, Aug. 24, 1814. The main building was ready for occupancy in 1827 and the entire structure had, up to that time, cost nearly \$2,500,000. President Fillmore laid the corner-stone of the extension July 4, Daniel Webster delivering the oration. This part of the Capitol was completed in 1867. The building faces east, as it was at first supposed that the city would grow mainly in that direction, and the portions first constructed are of sandstone, quarried in Va. The northern and southern extensions are of white marble from Mass.; the columns, also of marble, are from Md. The extreme length from north to south is 751 ft. 4 inches; maximum width, 350 ft.; area, 153,112 sq. ft. The great dome, originally of wood, is of cast iron and weighs 8,909,200 pounds. At its apex is Crawford's statue of Freedom, 19 ft. 6 inches in height. The dome towers above the base line of the east front, 287 ft. 5 inches; the diameter of the rotunda is 95 ft. 6 inches; height from floor to top of canopy, 180 ft. 3 inches. The Senate Chamber is 113x80 ft., and the Hall of Representatives 139x93. The Supreme Court sits in the old Senate Chamber, and Statuary Hall was once occupied by the House of Representatives. Corinthian columns support the porticos. Among the objects of national and artistic interest in the Capitol are busts of the Vice-presidents, portraits of the Speakers, historical paintings and frescoes and the mirrors in the Marble Room. Outside, near the center of the plaza, is a statue of Washington and nearby, at the base of the steps over the terrace, is Story's bronze figure of Chief-justice Marshall.

Capitoline Hill, The.—One of the seven hills upon which Rome was built. After the construction of the Servian wall, the first wall that included the entire city, the Capitoline became the citadel of Rome.

Capitoline Museum.—One of the principal Roman museums of antiquities. Founded, 1471.

Capri.—A famous island of Italy, situated off the coast of Campania, not far from Naples. It was the favorite residence of Augustus, and is especially noted as the scene of the debaucheries of Tiberius. It is now a popular resort for tourists and artists. Pop., about 5,000.

Capricornus, the goat, a constellation, 5, 145.

Capua.—A town of Italy, situated near the site of the ancient Capua, and containing a cathe-

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dral and a museum of antiquities. Pop., about 12,000.

Capuchins.—An order of mendicant monks, of the Franciscan Society. So called from the capouch or cowl that distinguishes their garb.

Caracas.—The capital of Venezuela; founded, 1567, and destroyed by an earthquake, 1812. It is an important trade center. Pop. (1891), 72,429.

Carafa, Michele.—(1785-1872.) An Italian composer; author of "Masaniello," etc.

Caramel, 5, 234.

Carat, Gold, 2, 223.

a weight, 5, 176; 13, 149.

Carbide defined, 5, 183.

Carbohydrates, 5, 233.

Carbolic Acid, or Phenol (C_6H_5OH).—One of the important substances derived from coal-tar. Though termed an acid, and forming salts, it is neutral to test-paper, and has more in common with the alcohols than with the acids. It possesses a peculiar, penetrating, and characteristic odor, and is soluble in twenty times its weight of cold water, and in all proportions in alcohol, ether, and glacial acetic acid. It blanches and corrodes the skin and other tissues, without causing the sensation of pain, and hence is employed in dentistry to destroy an exposed nerve. Known as phenols, the chemical compound is employed largely as a disinfectant and antiseptic, as well as a source of various coloring matters.

Carbolic Acid, 5, 243.

Carbon (Lat., *carbo*, coal) is one of the elementary forms of matter, the chief constituent of animal and vegetable tissues, and also largely entering into the composition of certain minerals, such as chalk, limestone, marble, etc. Coal consists largely of carbon, especially hard coal, while, crystallized, it occurs in the diamond, and in graphite or plumbago. In its impure forms it is met with also in lampblack, coke, and charcoal. In the diamond the carbon is the purest; in graphite, plumbago, or black lead, it is soft, opaque, of grayish-black color, and possesses metallic luster. The compounds of carbon are many: in medicine, it is used in the form of wood charcoal and animal charcoal. Wood charcoal is a remedy for flatulency and for correcting other unpleasantness; it is useful also in cases of dyspepsia, and is generally a good disinfectant and destroyer of bad smells. It is moreover an excellent dentifrice. Animal charcoal is chiefly used in pharmacy for decolorizing purposes in preparing vegetable alkaloids: for such uses it is known as bone

black. Carbon unites well with certain metals, and with iron it forms cast-iron and steel. The denser forms conduct electricity well, and are so used in batteries and electric lamps. United with oxygen, it is familiar as a constituent of the atmosphere, as carbon dioxide or carbonic acid.

Carbon bisulphide, 5, 191.

dioxide in air, 5, 153.

Tests for the presence of, 5, 154.

group of chemical elements, 5, 198.

monoxide, 5, 179.

Properties of, 5, 175.

Carbondale.—A city in northeastern Pa., the center of rich coal fields; pop. (1900), 13,536.

Carbonic Acid, or Carbonic Anhydride, formerly called *fixed air*, is a gaseous compound of carbon and oxygen. It is procured by the processes of combustion and respiration, and hence is always present in the air, though in minute quantity. Plants live upon it and absorb it into their tissues, there abstract and assimilate its carbon, and return its oxygen to the atmosphere in a pure condition. It is also present in spring water and often in quantities so that it sparkles and effervesces; it is also produced during the processes of putrefaction, fermentation, and slow decay of animal and vegetable substances in presence of air. It is largely employed by the manufacturers of aerated bread and aerated waters. Under a pressure of about 600 pounds it liquifies, and when allowed to escape through a small jet it rapidly evaporates and causes intense cold, so much so as to become frozen. It does not support burning. The gas derived from it, carbon dioxide, is invisible, and is heavier than air by one half, and has a pungent odor and slightly acid taste. In a pure state the gas cannot be respired, as it supports neither respiration nor combustion. When the portion in the atmosphere is increased to a considerable extent, as happens sometimes, it endangers life. The familiar "rising" of bread is brought about by carbonic acid gas escaping through and permeating the dough, making it light and porous. In this form it is known as yeast or as baking powder. We see its uses also in the chemical fire engine.

Carbonic acid gas, a plant food, 5, 157.

Lime water a test for, 5, 154.

Properties of, 5, 178.

in air, 5, 153.

Carbonic anhydride, 5, 178.

Carboniferous period, 5, 464.

Carborundum, 5, 198.

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Cardboard modeling, 7, 52.

Cube, To model a, 7, 245.

Parallelopiped, To model a, 7, 248.

Cardiac nerves, 1, 284.

plexus, 1, 285.

valves of the stomach, 1, 277.

Cardinal Bird, 4, 187.

Cardinals.—The highest dignitaries of the Church of Rome, next to the Pope, of whom they are the electors and counselors. They are appointed by the Pope, and each given the style and title of His Eminence; their distinctive garb is the cassock, cape, and scarlet birretta (or square cap). The body of cardinals is called the Sacred College: their total number is limited to seventy, of whom six are bishops of suburban sees in the vicinity of Rome; fifty, styled cardinal-priests, hold their titles from parishes in Rome, some of them being at the same time bishops of foreign dioceses; while the remaining fourteen are cardinal-deacons. When a Pope dies, the cardinals are summoned to elect a successor, which they do in secluded and private conference, generally selecting one of their own members known to have been previously nominated by the Pope. The first American cardinal was the late Archbishop John McCloskey of New York. Archbishop Gibbons of Baltimore has been a cardinal since 1886.

Cards, Form of, for calling, 1, 61.

on first calls, 1, 62.

Visiting, 1, 60.

Cards, Calling, 1, 60.

for husband and wife, 1, 61.

for married women, 1, 61.

for men, 1, 61.

for single women, 1, 61.

for those in mourning, 1, 61.

for widows, 1, 61.

indicating reception day, 1, 61.

Pour Prendre Conge', 1, 62.

sent by mail, 1, 61.

Use of titles on, 1, 61.

Cards and Card-Playing.—The origin of card-playing is not definitely known. Some affirm that games with cards were brought to Europe from the East; others say that they were a device of the Spanish Moors, originating about the beginning of the 15th century. At that era, it is said, that they represented the seasons: two colors representing the two equinoxes, and the four suits the four seasons. Spring was designated by a rose (now a diamond), summer by a trefoil (a club), autumn by an acorn (a spade), and winter by a cub (now a heart). The twelve court cards represented the twelve months and the 52 cards represented

the 52 weeks in the year. After the expulsion of the Moors, the Spanish changed the symbols of the cards and made the four suits represent the four castes or grades of society. In France, at different periods, the kings, queens, and knaves stood for different kingdoms or personages; while in England hearts stood for England, spades for France, clubs for the Pope, and diamonds for Spain. As years passed since cards came into use as a game, there have been modifications and varieties in the numbers of the pack, their form, and device, and their representative character. The pack has for some centuries, however, remained much the same as to number, as well as to the extent of their use. The manufacture of playing cards in this country and abroad is now an extensive and remunerative trade: in Russia their manufacture is a profitable government monopoly.

Carey, Henry Charles.—Born at Philadelphia, 1793; died there, 1879. A noted American political economist. His chief works are "An Essay on the Rate of Wages," "Credit System in France, Great Britain and the United States," "Unity of Law," etc.

Caribbean Sea.—An arm of the Atlantic Ocean, lying between South America on the south; the Greater Antilles on the north; Central America and Yucatan on the west, and the Caribbee Islands on the east. The Yucatan Channel connects it with the Gulf of Mexico.

Caribbees.—A chain of islands forming a part of the West Indies and lying east of the Caribbean Sea.

Caribou, 4, 29.

Carlisle.—The capital of Cumberland County, Pa., bombarded by the Confederates in 1863 during the invasion of Pa. It is the seat of Dickinson College, and of a government training and industrial school for Indians.

Carlisle, John G., Early marriage of, 1, 237.

Biography of, 12, 221.

Carlists, The.—In Spanish history, the supporters of the pretender Don Carlos, brother of Ferdinand VII., and the later claimants to the throne of Spain. Up to 1830, the Salic law prevailed in Spain, but Ferdinand VII. having no child except a daughter, announced that the succession would in future pass to both male and female. He thus set aside the succession of his brother Carlos for Isabel, an infant girl then not more than three years old. Carlos resisted, and a civil war ensued from 1833 to 1839. In 1845, Don Carlos withdrew his claim and died in 1855 at Trieste. Don Carlos the younger, after an unsuccessful struggle, was arrested in France in 1860, but

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renounced his claim and died in the following year. In 1871, the nephew of the preceding renewed the struggle, but after five years' desultory fighting, he fled to France, and the contest ended.

Carlos, Don, was the title of several aspirants to the Spanish crown. The present aspirant is Carlos Maria de los Dolores Juan Isidoro José Francisco, Duke of Madrid, born 1848. He carried on active warfare (1872-76).

Carlovingian kings, 10, 236.

Carlowitz, Treaty of, 10, 328.

Carlsbad, or Karlsbad (*i. e.*, Charles's bath).—

A town in Bohemia, on the Tepel near its junction with the Eger, 70 miles to W. N. W. of Prague. It is famous for its hot springs, which are the resort of thousands annually, drawn chiefly from the aristocratic and well-to-do peoples of Europe. In this respect it is the most fashionable watering-place on the continent, and the city appears like a vast hotel. There are 17 different springs, the constituents of the waters being chiefly sulphate and carbonate of soda, carbonate of lime, chloride of sodium, and sulphate of potash, with traces of other salts, and a large amount of free carbonic acid gas. The native population is under 10,000, but the visitors in summer sometimes number 20,000.

Carlyle, Jane Baillie Welsh.—(1801-1866.)
The wife of the historian, Thomas Carlyle.

Carlyle, Thomas.—(1795-1881.) A famous Scottish historian, philosopher and essayist, was born at Ecclefechan, Dumfriesshire, and died at Chelsea, London. He married Jane Baillie Welsh in 1826. His complete works were published in thirty-seven volumes. His life has been written by Froude.

Carlyle, Thomas, 14, 95, 172, 195, 247.

Letters of, 1, 88.

quoted on Mohammed, 3, 387.

Carman, (W.) Bliss.—A Canadian lyric poet and essayist. He was born in Fredericton, New Brunswick, in 1861. After graduation from the University of New Brunswick, he studied in Edinburgh and, later, at Harvard. Since then he has resided in Boston and New York. He produced, in collaboration with Richard Hovey, three books of the "Songs from Vagabondia" series. Among the later works are "By the Aurelian Wall," "Ballads of Lost Haven," "Low Tide on Grand Pre," "A Winter Holiday," and the "Pipes of Pan" series. His chief prose work is "The Kinship of Nature" a book of essays.

Carman, Bliss, on the Arthurian legend, 3, 433.
Style of, 8, 384.

Carmel.—A mountain ridge in Palestine; noted as the scene of many of the deeds of Elijah and Elisha. Caves gave protection to Christian hermits in the early days of Christianity, and from this source arose the order of the Carmelites, whose monastery is built upon the mountain, at a height of 480 feet above the sea.

Carmelites, or White Friars.—An order of the Mendicant monks, established by Berthold, about 1156. They had a number of monasteries in England, and "white friars"; a certain locality in London is named after an establishment of the order founded there in 1245.

Carmen.—An opera founded upon the story by Prosper Mérimée; the music by Bizet. First produced, 1875.

Carmen Sylva.—The pseudonym of Queen Elizabeth of Rumania.

Carnation, 5, 71.

Bizarre, 5, 71.

Flake, 5, 71.

Picotée, 5, 71.

Carnegie, Andrew.—(Skibo Castle, Sutherland), age 64; a hard-headed philanthropic Scotch-American; began life at 13 as a stoker; went to America, where he made a fortune in the Pittsburg iron trade; reputed to be worth £40,000,000, and has an income of £2,000,000 a year; he says, "a man who dies rich, dies disgraced," and is distributing his wealth during his lifetime. Among his gifts in 1901 were 5 million dollars for free libraries in New York, 5 million dollars for free libraries in Pittsburg, Pa., and 10 million dollars to Scottish universities, with a like sum in aid of university extension and scientific research in the U. S., through the Carnegie Institution, Washington, D. C.

Carnegie, Andrew, on a college education, 8, 76.

Carnifex Ferry (W. Va.), **Battle of**, 11, 468.

Carnival, 13, 93.

Carnot, Marie François Sadi.—(1837-1894.)

A French statesman, who after filling a number of high offices under the government, was elected president of the Republic in 1887. He was assassinated by an anarchist.

Carolina, Colony of, 11, 48.

crake, 4, 131.

parrot, 4, 208, 210.

rail, 4, 131.

wren, 4, 166.

"**Caroline**," **The**, 11, 359.

Caroline Islands.—They lie north of New Guinea, and between the Philippines on the east and Kingsmills on the west. The main islands are Yap, Ponape, Strong, Babel-thouap, and Rouk. The Pelew Islands are usually included in the group. Spain and Germany

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- claimed Yap until 1885, when it was awarded to Spain.
- Caroline Matilda**, of Denmark, 14, 311.
- Carp**, 4, 301.
 Food of the, 4, 301.
 Food value of the, 4, 301.
 Geographical range of the, 4, 301.
- Carpaccio**, 9, 225.
- Carpathian Mountains**.—An extensive mountain system of Central Europe, separating Hungary and Transylvania from Moravia, Silesia, Galicia, Bukowina, and Rumania.
- Carpeaux, Jean Baptiste**, 9, 401.
- Carpenter, The**, 13, 418.
- Carpenter, William Benjamin**.—(1813-1885.) A noted English naturalist.
- Carpet, Axminster**, 1, 33.
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- Carrageen moss**, 5, 103.
- Carrier-pigeon**, 4, 111.
- Carrier-Pigeons, Speed of**.—The speed of carrier-pigeons appears to depend as much on the clearness of their sight as on the strength of their wings. In an experiment recently made with some Berlin pigeons, on a clear day, a distance of over three hundred miles, from Cologne to Berlin, was accomplished in five hours and a half, or at the rate of nearly sixty miles an hour; while the most expeditious of a group let loose the next day—a day not of the same kind—took twelve hours to reach Berlin. Hence it would appear that in the latter case a good deal of the pigeons' time was taken up in exploring the country for landmarks. It is not by instinct, but by sight, that the carrier-pigeon guides its course.
- Carrion crow**, 4, 138.
- Carroll, Charles**, 11, 77.
- Carroll, Julia W. C.**, on women in business, 7, 435.
- Cars, Pullman**, 8, 210.
- Carson, Christopher (KIT)**, 12, 221.
- Carson City**.—The capital of Nev., noted for the gold and silver mines in its vicinity. Pop. (1900), 2,100.
- Cartaret, Sir George**, 11, 47.
- Carter, John**, the paralytic artist, 8, 30.
- Carthage**.—An ancient and famous commercial city of Africa, founded as a Phœnician colony by emigrants from Tyre in 850 B. C., and subsequently a republic and one of the great empires of the ancient world. It stood on the peninsula overlooking the Mediterranean, about 20 miles south of Utica and near the site of the present town of Tunis. The early records of the State have not been preserved. Before the Punic War, we know that it became one of the chief commercial emporiums of the world; and during the period of her greatest prosperity was a notable maritime power. In 150 B. C. the population of the city numbered 700,000. Her authority and sway extended over the northern coast of Africa for about 2,000 miles from the Pillars of Hercules (the entrance to the Strait of Gibraltar). It was in the Punic War (264 B. C.) that led the two great powers of the then world, Rome and Carthage, to compete for the possession of Sicily, which Rome at length won. Under Hamilcar, Carthage conquered Spain, but suffered greatly in the second Punic or Carthaginian War, in the contest with Rome, which ended by the defeat of Hannibal, son of Hamilcar, at the battle of Zama, in 202 B. C. The Third Punic War, begun in 149 B. C., ended Carthage's rivalry with Rome. Besieged by land and sea by the younger Scipio Africanus, Carthage was taken and destroyed, and her territory divided between Rome and Numidia.
- Carthage**, 10, 214.
- Carthage (Mo.), Battle of**, 11, 468.
- Carthage, Destruction of**, 10, 217.
- Carthusians**.—A religious order, of austere rules, founded by Bruno, of Cologne, about 1084. The Carthusians appeared in England in the 12th century and established a monastery on the site of the present Charter House in London.
- Cartier Jacques**, 11, 39.
- Carver, John**, 11, 44, 55.
- Carving**, 1, 115.
 a beefsteak, 1, 116.
 a duck, 1, 117.
 Chair for the carver, 1, 115.
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Carving—*Continued.*

- leg of lamb, 1, 116.
- leg of mutton, 1, 116.
- leg of venison, 1, 116.
- partridge, 1, 117.
- rib roast, 1, 116.
- roast ham, 1, 117.
- roast of pork, 1, 117.
- sirloin roast, 1, 116.
- tongue, 1, 117.
- turkey, 1, 117.

Cary, Alice.—(1820-1871.) An American author; sister of Phoebe Cary.

Cary, Phoebe.—(1824-1871.) An American author; sister of Alice Cary.

Carya alba, 4, 449.

- amara, 4, 447.
- hickoria, 4, 447.
- microcarpa, 4, 449.
- olivæformis, 4, 425.
- porcina, 4, 450.
- sulcata, 4, 449.
- tomentosa, 4, 448.

Cary's Rebellion, 11, 55.

Casabianca, Louis.—(1755-1798.) A French naval officer. He and his son were lost with their ship at the battle of the Nile. Mrs. Hemans's well-known poem is based upon this event.

Cascade Mountains.—A chain of mountains running through Ore., Wash., and British Columbia and almost parallel to the Pacific coast. It contains many extinct volcanoes and high peaks, the chief of which is Tacoma, 14,444 feet.

Casco Bay.—A bay on the southern coast of Me., about 20 miles in extent and abounding in islands.

Cash 13, 40.

- book, 13, 39.

Cashmere goat, 4, 27.

- shawls, 4, 27.

Casimir III., of Poland, 10, 307.

Cass, Lewis, 11, 220.

Cassava, 5, 51.

Cassiopeia, a constellation, 5, 136.

Cassiterite, 5, 216, 439.

Cassius, Longinus.—Died 42 B. C. A Roman general and politician; one of the conspirators against Julius Cæsar, in 44. He killed himself after being defeated by Antony at Philippi.

Castanea dentata, 4, 450.

- pumila, 4, 450.

Castelar, Emilio, 10, 460.

Castile.—An old kingdom of Spain occupying the central and northern part of the country. It was governed by Moorish counts. Isabella

of Castile married Ferdinand of Aragon in 1469. She became queen of Castile in 1474. Ferdinand became king of Aragon in 1479. In this way Castile and Aragon were united.

Castle Garden.—A large circular building in Battery Park, New York City; originally a fort, built in 1805 and for some years used as an opera house and public hall. Jenny Lind made her first appearance here, 1850. From 1855 until 1891, the city's immigrant station; now an aquarium.

Castor, a star, 5, 142.

Caswell, Richard, 11, 77.

Cat, 4, 22.

- Ailments of the, 1, 144.
- Angora, 1, 143.
- Bed for the, 1, 143.
- Care of the, 1, 142.
- Characteristics of the, 4, 22.
- Cleaning and bathing the, 1, 143.
- Eyes of the, 4, 23.
- Feelers of the, 4, 23.
- Food for the, 1, 144.
- History of the, 4, 22.
- Maltese, 1, 143.
- Paw of the, 4, 23.
- Persian, 1, 143.
- Raising kittens, 4, 144.
- Russian, 1, 143.
- Training to cleanly habits, 1, 143.

Cat who served a lion, Hindoo fable, 3, 170.

Catacombs.—Caves, grottoes, or subterranean places, sometimes of considerable extent, used for the burial of the dead. The more notable catacombs are those near Rome, on the Appian Way, the place of interment of early Christians, their hiding-place from persecution, and chapels of worship. This site now abounds in archaeological interest, from the mystic symbols, figures, and other specimens of early Christian art which adorn the sarcophagi, chambers, and chapels. Its length extends underground for hundreds of miles, and is computed to contain the bones and other relics of many million persons. Catacombs of similar character are found in Paris, and in Egypt, Malta, Sicily, and at Syracuse in Sicily.

Catalonia.—A former province of Spain, situated in the northwestern part. Its surface was mountainous. The language is Catalan. It was deprived of its constitution in 1714, when it was conquered by Philip V.

Catalpa bignonioides, 4, 419.

- of Hartford, Conn., Historic, 4, 419.
- Southern, 4, 419.
- speciosa, 4, 419.
- Western, 4, 419.

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Catarrh, Chronic, 1, 324.

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Eggs of the, 4, 114.

Nest of the, 4, 114.

Catesby, Mark, introduced white ash into England, 4, 417.

Catfish, 4, 306.

Blue cat, 4, 307.

Channel cat, 4, 307.

Characteristics of the, 4, 307.

Food of the, 4, 307.

Habits of the, 4, 307.

Home of the, 4, 307.

Horned pout, 4, 306.

Pout, 4, 307.

Preacher, 4, 306.

Reproduction of the, 4, 307.

Salt water, 4, 307.

Skin of the, 4, 307.

Where found, 4, 306.

Cathedral, St. Patrick's, 9, 422.

Catherine de' Medici, 10, 409.

Catherine Howard, 10, 301.

Catherine of Arragon, 10, 301, 436.

Catherine I. of Russia, 10, 431.

Catherine II. of Russia, 10, 434.

Cathlamat or Katlamat.—A tribe of Indians whose habitat was on both sides of the Columbia River, near its mouth.

Catholic Association, 10, 369.

Emancipation act, 10, 339, 369.

Rent, 10, 369.

Catiline's Conspiracy.—Lucius Sergius Catiline (108-62 B. C.) organized a wide-spread conspiracy against the Roman republic, which was defeated by the vigilance of Cicero, the consul. In 65 B. C. Cicero delivered his fourth oration in the senate on Dec. 5. Catiline assumed command of his forces but was overtaken by the army of the Senate, as he was attempting to escape into Gaul, and in the battle which ensued Catiline was defeated and slain.

Catiline, 10, 220.

Catkins, 4, 413.

Catlin, George.—Born at Wilkesbarre, Pa., 1796; died at Jersey City, N. J., 1872. A noted American artist and dweller among the North American Indians. He is chiefly known for his "Illustrations of the Manners, Customs, and Conditions of the North American Indians" (1841). His unique and valuable collection of 500 portraits of Indians from life, now forms part of the National Museum at Washington.

Cato, Marcus Porcius.—(234-149 B. C.) An eminent Roman senator, noted for his hatred of the Carthaginians. He concluded all his

addresses—upon every subject—with the words "Carthage must be destroyed." He was known as Cato Major, or Cato, the Censor.

Cato, Marcus Porcius.—(95-46 B. C.) Known as Cato the Younger. Roman patriot and philosopher.

Cato, the Censor, 10, 217.

Cats, Egyptian goddess of, 4, 22.

Mummies of, 4, 22.

Cat's-eye.—A beautiful species of quartz much prized for jewelry on account of play of light which has given it its name, and which results from the parallel arrangement of minute fibers of its own substance or of a foreign substance. Found in Malabar and Ceylon.

Cat's-eye, 5, 447.

Catskill.—Cap. of Greene Co., N. Y. on the Hudson River, 109 m. from New York and 34 from Albany. Pop. (1900), 5,484.

Catskill Mountains, The.—A part of the great Appalachian range. They are on the west bank of the Hudson River. The highest peaks are:—

Slide Mt., 4,220 ft.

Hunter Mt., 4,052 ft.

Peakamoos Mt., 4,000 ft.

High Peak, 3,809 ft.

Round Top, 3,804 ft.

Panther Mt., 3,800 ft.

Big Indian, 3,800 ft.

Cattermole, George.—(1800-1868.) A noted English painter and illustrator. One of the first artists to use water colors.

Cattle.—Quadrupeds of the bovine family (the ox and the cow), which form an important part of the wealth of a country. Sometimes the term is used to include all domestic animals (quadrupeds), such as sheep, goats, horses, mules, asses, and swine, in addition to those of the ox family. Cattle in the United States are raised largely, especially on the fertile plains of the West, and not only for local uses as meat food, and for their hides, and in the case of sheep for their wool, but for export to foreign markets as dead meat, made practicable now by modern methods, freezing and cold storage. Of farm animals in this country, statistics show that, on Jan. 1, 1899, the U. S. possessed of oxen and other cattle 27,994,225, value \$639,931,135; of milch cows 15,990,115, value \$474,223,925; of sheep 39,114,453, value \$107,697,554; of swine 38,651,631, value \$170,109,743; and of horses 13,665,307, value \$511,074,813. Great Britain, Australasia, and France, are the leading cattle-breeding countries abroad, with numbers almost similar,—*viz.*, about 12,000,000 head each. In the U. S. the

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hog is a valuable export, as bacon, ham, and pork, the number packed and marketed in 1899 being close upon 30 million. The distribution (export trade) by countries of American hogs was chiefly to Great Britain, Germany, Belgium, Netherlands, France, Cuba, and the British West Indies, Brazil, Haiti, etc.

Cattle, 4, 15.

Aberdeen, 4, 16.

Angus, 4, 16.

Ayrshire, 4, 16.

Dairy, 4, 16.

Durham, 4, 16.

Frisian-Holstein, 4, 16.

Galway, 4, 16.

Hereford, 4, 16.

History of, 4, 16.

Jersey, 4, 16.

Mountain British, 4, 17.

North Devon, 4, 16.

Scotch, 4, 16.

Short-horn, 4, 16.

Suffolk dun, 4, 16.

Teeswater, 4, 16.

Caucasians.—The highest type of the human race. Under this name are included most of the European peoples, the Circassians, Armenians, Persians, Jews, etc.

Caucasian race of men, 10, 147.

Caucasus.—A lofty mountain range in Russia, between the Black and Caspian seas, and the conventional boundary between Europe and Asia. The length of the range is about 800 miles, with a breadth of about 120 miles. On both sides of the central chain are connecting branches or transverse ridges. The highest point of the main system is Mt. Elburz, which has an altitude of 18,520 feet. The chief pass is the chain in Dariel Pass, along which the scenery at its high elevations is magnificent. The snow line (perpetual) is at a limit of 11,000 feet above the sea. Among the tribes inhabiting the region are the Circassians, Georgians, and Mingrelians, who speak different languages but are all subject to Russia. The chief rivers that rise in the Caucasus are the Kur, Kuban, and Terek. The region about, lying north of Persia and Asiatic Turkey, forms a province and government of Russia, with an area of 180,843 square miles, and a population of 9,250,000. A governor-general, representing the emperor, has supreme direction and control of all its affairs, both civil and military.

Caucus, 12, 221.

Caudine Forks, Battle of, 10, 213.

Caustic soda, 5, 205.

Cavaignac, General, 10, 373.

Cavalleria Rusticana.—An opera by Mascagni; first produced in 1890.

Cave of the winds.—A recess behind the Falls of Niagara, much frequented by tourists.

Cavendish, Lord Frederick Charles.—(1836–1882.) Chief secretary to the lord-lieutenant of Ireland. He was assassinated in Phoenix Park, Dublin, for political reasons.

Cavendish, Lord Frederick, 10, 383.

Caviar, 4, 303.

Cavité (*kä-vē-tā'*).—A town on the Bay of Manila in the island of Luzon in the Philippines, Admiral Dewey (then Commodore), on May 1, 1898, defeated a Spanish fleet near here.

Cavour, Count, 10, 463.

Patriotic aims of, 11, 3.

Cawnpore.—A city and district in the Northwest provinces of British India. The district has an area of 2,363 square miles, with an estimated population of 1,250,000. The city is an important military station, situated on the Ganges, about 100 miles southwest of Lucknow. Here, during the Sepoy mutiny, in June and July, 1857, the mutineers under Nana Sahib rose against the British and other Europeans and massacred them, with about 125 women and children. Their bodies he threw into a well, over which now stands a handsome monument to their memory. To rescue, if possible, the British during the Sepoy rising, Sir Henry Havelock made a forced march with British troops from Allahabad and routed the forces of the chief rebel, Nana Sahib, after which, reinforced by Sir James Outram, he fought his way to Lucknow. Here, however, the relieving forces were themselves besieged by masses of the insurgents, until the opportune arrival of Sir Colin Campbell, afterward Lord Clyde, when the mutineers were suppressed and punished, and the country was restored to order. Pop. of city of Cawnpore, about 200,000.

Caxton, William.—(1422–1491.) The first English printer. The first printed English book, "The Recueil des Histoires de Troye," appeared about 1474.

Cayenne.—The capital of French Guiana; an important seaport. Pop., about 12,300.

Cayuga Indians.—A tribe of the Iroquois confederacy of Indians, also called the Six Nations. They originally inhabited the neighborhood of Cayuga Lake, N. Y. During the Revolution they joined the British against the Colonists. After the war, they ceded most of their lands to the state of N. Y., and the tribe scattered and almost disappeared. Remnants of the tribe exist in the Ind. Ter., Wis., and Ontario, Canada.

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Cayuga Lake.—In central New York, a lake with outlet into Lake Ontario. Length, about 38 miles.

Cazenovia.—A town in Madison Co., N. Y., seat of a Methodist seminary. Pop. (1900), 1,819.

Cecilia, Saint.—A Christian martyr, put to death at Rome, 230. The subject of Raphael's great painting, and of one of Chaucer's Canterbury Tales.

Cecrops.—According to Athenian tradition, the first ruler of Athens, said to have introduced civilization into Greece.

Cecrops, 10, 90.

Cedar a decorative wood, 1, 37.

Cedarbird, 4, 196.

Cedar Creek (Va.), Battle of, 11, 469.

Cedar Keys.—A seaport in Fla., with a large trade in sponges, fish, turtles, etc. Pop. (1901), 739.

Cedar Mountain (Va.), Battle of, 11, 469.

Cedar Rapids.—A city in eastern Iowa. It is a railway center, noted for its trading and manufacturing industries. Pop. (1900), 25,656.

Cedar, Red, 4, 476.

Cedar, Symbolism of, 1, 198.

Cedar waxwing, 4, 197.

Cedar White, 4, 457.

Ceiling of the sleeping room, 1, 18.

Celebes.—One of the East India Islands, the third in size. It belongs to the Dutch and has a population of about 1,500,000. Chief export coffee.

Celery, 5, 55.

Celestial Empire, The.—A name popularly applied to the Chinese empire, the inhabitants of which are termed "Celestials."

Celestial equator, 5, 108.

Celestial horizon, 5, 109.

Celestial measurement, 5, 121.

Celestial sphere, 5, 106.

Poles of the, 5, 107.

Celestial sisters, 3, 159.

Celibacy of the clergy, 10, 260.

Cell growth, 4, 391.

Cell theory, 4, 391.

Cellini, Benvenuto, 9, 379.

Cells, Size of, 4, 391.

Cellular plants, 4, 392.

Celluloid, 5, 237.

Cellulose, 4, 391; 5, 237.

Celtic element in the English language, 8, 360.

Celts, or Kelts.—An Aryan or Anglo-Indian people, known to the early Romans as *Galli* or *Celtae*, and supposed to have crossed to Britain from Belgic Gaul and intermarried with the natives they conquered and merged with. Portions of them have remained more or less distinct, such as the Bretons, Irish, Welsh

or Manx Gaels, and the Gaels of the Scottish Highlands—all of them still traceable to-day. The Cornish Celts are supposed to have belonged to these early Aryan people who overspread Europe in early times, but their dialect has now fallen into disuse. In northern Britain, Gaelic, which is still spoken, and in Ireland, where a modification of Gaelic or Erse may also to-day be heard, we have, with Cymric, spoken in Wales and in Brittany, traces of the language spoken by the Celtic nations. These people originally occupied not only the British Islands, but, as we have hinted, parts of France, Spain, northern Italy, and the western parts of Germany. When they left the common cradle of the race, the Far East, we have now no means of knowing. The Celts were a vigorous, warlike people, and for long held their own against the Romans, Teutons, and all those among whom they settled. They ultimately fell before the dominant Roman, though at one era the Cis-Alpine Gauls plundered and burned much of the city of Rome, invaded Greece, overran Thrace, and crossing the Bosphorus made extensive conquests in Asia Minor. They retained their own tongue and distinctive tribal character as late as the 5th century of the Christian era.

Celts, 10, 233.

Cemeteries, National.—For the burial of those who died in the naval or military service. There are 82 of these cemeteries in the United States, the larger number being in the Southern States. They are controlled by the government.

Cemetery (Greek, a "resting-place" or "sleeping-room").—A burial place for the dead; a necropolis; also used by the primitive Christians for purposes of worship. The cemetery, among the latter, was at first extra-mural, that is, outside the town walls; but later, influenced by the sanctions of the Church, places for the interment of the dead were sought in consecrated grounds, and in the vaults or crypts of sacred edifices. The Romans commemorated their dead by monuments, obelisks, and columns erected on the sides of spacious roadways, such as the Appian Way; the Egyptians interred their dead in catacombs, or under vast pyramids; while the Hebrews generally selected ornamental gardens, valleys, and groves, as their places of sepulture. In Europe, as well as in Mohammedan countries, the cemetery is a striking feature in the neighborhood of the chief cities. Père la Chaise, at Paris, named after the Confessor of Louis XIV., and first used in 1804, gave the modern impetus to

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the elaborate arrangement for burying the dead. The Campo Santo (sacred field) of Pisa, and the Campo Santo of Genoa, with their wealth of memorial sculpture, are both noted cemeteries in Italy. The crypt of St. Paul's, London, and Westminster Abbey are notable shrines of the dead. Kensal Green Cemetery, London, the Necropolis in Glasgow, and Dean Cemetery, Edinburgh, are among the well-known repositories in Britain for the departed. Mt. Auburn, near Boston, Laurel Hill, on the Schuylkill above Philadelphia, and Greenwood, L. I., near Brooklyn, are among the early and notable cemeteries, together with those hallowed by associations connected with the Civil War, are among the chief burial plots in the New World.

Cemetery Ridge, 11, 470.

Cenci, Beatrice.—(1577-1599.) A young Roman noble-woman, who was executed, with other members of her family, for the murder of her cruel father. A favorite subject with artists and poets.

Cenozoï vera, 5, 466.

Censors were two magistrates of high rank and authority in ancient Rome, whose duties were to keep the census or register of the citizens and their property, collect the public revenue, and exercise control over the morals of the people. At first they were chosen from the patricians; but later were also drawn from the plebeian class, familiar with the construction of public works and the superintendence of public buildings—duties incumbent also on the Censors, as Cicero relates (in "De Legibus," III., 3). Exercising a function similar to what is now called public opinion, the Censors were at once revered and dreaded, as their own sense of right and of the duties of their high office was their sole guide in exercising their functions. Part of their duty was also to administer the public finances. The office continued till about the year 22 B. C.

Censors, 10, 210.

Census.—According to the Constitution, the people of the entire country must be counted every 10 years, and representatives in Congress apportioned accordingly. The first census was taken in 1790, and it was a simple matter of enumeration by the U. S. marshals. Since then the work has been so greatly enlarged and elaborated that a permanent census bureau has been established, and the results of one count are hardly made public before preparations are begun for another. Besides the mere numbering of the people a vast number of facts and figures are gathered, from which are compiled and published many in-

teresting statistics relative to the resources and development of the country and to the social, mental, moral, and industrial condition of the people.

Census of the United States, The Third, 11, 212.

Cent, 13, 158.

Connecticut, 13, 159.

Centare, 13, 153.

Centaur's, Battle of the, 10, 110.

Centaurus.—An ancient southern constellation, the brightest star of which is Centauri, the third brightest star in the heavens.

Centennial Exhibition.—Held at Philadelphia, 1876, in celebration of the hundredth anniversary of American independence. It was international in character, and was continued about six months.

Centennial Exhibition, 9, 331; 12, 222.

Its effect on sculpture, 9, 412.

Centigrade thermometer, 5, 268.

Centigram, 13, 153.

Centiliter, 13, 153.

Centimeter, 13, 153.

Centipedes, 4, 364.

Characteristics of the, 4, 364.

Habits of the, 4, 364.

Central Africa, British.—An area of 500,000 square miles north of the Zambesi; native population, about 3,000,000.

Central America.—The five republics of Guatemala, Honduras, Salvador, Nicaragua, and Costa Rica constitute what is known as Central America. These states declared their independence Sept. 21, 1821; seceded from the Mexican Confederation July 21, 1823, and formed the Central American Confederation, which was dissolved in 1839. The history of these states is a record of anarchy and civil war. Their union under one president was proposed at the Pan-American Congress 1889-90. In 1895, Nicaragua, Honduras, and Salvador united as a Central American Republic. Under a treaty of June 15, 1897, the five states were united into a republic, each preserving its autonomy. Since that date changes have occurred in the relations of these states to each other and to the central government.

Central India Agency.—Official name for a collection of states in India under the control of Great Britain.

Central Pacific Railroad, 12, 348.

Central Park.—The principal park in New York City. Besides its fine drives, it contains Cleopatra's Needle, the Mall, and the Metropolitan Art Museum, etc. It was designed by Olmsted and Vaux. Area, 840 acres; length, 2½ miles.

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Centuriata, 10, 210.

Centurion (Latin, *centum*, a hundred), was a Roman infantry officer who had the command of 100 men, afterward increased to an indefinite number, but for the most part limited to the sixtieth part of a legion (4,500 men). Centurions were of two grades, and were selected by the tribunes. Their duties were to drill the soldiers and appoint their tasks; they had also power to punish minor offenses. Their usual badge was a vine-rod.

Century, 13, 93.

Century-plant, 5, 49.

Century, Twentieth, 13, 103.

Cephaëlis ipecacuanha, 5, 62.

Cepheus, a constellation, 5, 137.

Ceramic art, 1, 217.

Cerberus.—In Greek mythology, the watch dog that guards the entrance to the infernal regions; represented usually with three heads.

Cerberus, 10, 102.

Cerebellum, part of the brain, 1, 283.

Cerebrum, part of the brain, 1, 283.

Ceres, 10, 95.

Cereus, McDonald, 5, 92.

Cerium.—A rather rare metal, resembling iron in color and luster, but soft, and both malleable and ductile. It occurs in the mineral cerite, monazite, allanite, etc. It takes fire more readily than magnesium, and burns with much brilliancy. It slowly decomposes cold water, and dissolves rapidly in hydrochloric acid. Its symbol is Ce., and its specific gravity is 6.7. Its atomic weight is 141, and its atomic volume 21.0. Cerium was isolated and named by the chemist Berzelius, in 1803, after the asteroid Ceres, then but recently discovered. Combined with oxygen, it forms two oxides, and its oxalate is in certain cases a useful anti-emetic medicine. Being difficult to procure in a separate metallic state, it is not employed in the arts and manufactures.

Cerium, Oxalate of, 5, 202.

Properties of, 5, 202.

Cerro Gordo (Mexico), Battle of, 11, 359.

Certificate of deposit, 7, 482.

Certified Public Accountancy, 13, 4.

Certosa.—In Pavia, Italy, a former Carthusian monastery, famous as one of the largest and most magnificent in existence.

Cerulean warbler, 4, 186.

Cervantes Saavedra, Miguel de.—(1547–1616.) A celebrated Spanish writer; best known as the author of "Don Quixote."

Cervical plexus, 1, 285.

vertebræ), 1, 273.

Cesari, Giusippe.—(1570–1640.) An Italian painter of note.

Cesnola (ches-nō'lä), Count Luigi Palma di.—

A noted Italian-American archæologist; director of the Metropolitan Museum, New York, since 1879.

Cessions of Territory.—See ALASKA; CAL.; CUBA; FLA.; GADSDEN PURCHASE; HAWAIIAN ISLANDS; LOUISIANA PURCHASE; N. MEX.; PHILIPPINE ISLANDS; PORTO RICO; ST. JOHN ISLAND; ST. THOMAS ISLAND; SANTO DOMINGO; TEXAS; YUCATAN.

Cete, or whales, 4, 11.

Cetus, a constellation, 5, 139.

Ceuta (Spanish, *thay-oo'tä*).—A fortified seaport town, on the Morocco coast, opposite Gibraltar. Anciently it was known as Septa, or Septum, or in Moorish Sebtä. The town belongs to Spain and its population (about 8,000) is embraced in that of Cadiz. Ceuta, and the other possessions of Spain on the north African coast, are used chiefly as convict stations. The place derives its name from its seven hills, on a peninsula overlooking the Mediterranean and the Strait of Gibraltar. It is situated near Tangier, and is defended by a citadel and forts erected on Mount Hacho, the ancient Abyla, or south Pillar of Hercules.

Ceylon.—An island and British colony in the Indian Ocean, situated to the southeast of Madras presidency, with which it is almost connected naturally by a peninsula and a chain of reefs and sand banks, called Adam's Bridge. The Gulf of Manaar and Palk Strait are the separating waters. Its length is 266 miles, its breadth, 140 miles, and its total area, 25,333 square miles. The population, in 1899, was 3,447,094, the bulk of which are Cingalese, Tamil coolies, with Moors, Malays, and about 7,000 Europeans, besides about 25,000 burghers, or European descendants. More than half of the population are Buddhists, while the other divisions are Mohammedans and Christians. The island, which is very fertile, and on the whole healthy, though subject to thunderstorms and heavy rains, following the monsoons of May and October, produces grain, rice, tea, coffee, cocoa, with cinnamon, and caoutchouc. It has 300 miles of railway open for traffic, while over 200 miles additional have been projected and surveyed. The chief towns are Colombo, the capital (pop., 130,000), situate on the west coast; Galle (pop., 34,000), on the southwest coast; and Kandy (pop., 21,000), in the interior. The administration is under a governor, aided by an executive council of 5 members, supplemented by a legislative council of 17 members. The basis of the local law is

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Roman Dutch, but the criminal law has been remodeled from the Indian Penal Code. Education is unsectarian and in most schools free.

Ceylon, added to India, 10, 360.

Ceylon jungle fowl, 4, 105.

Chadbourn, Paul Ansel.—Born at North Berwick, Me., 1823; died at New York, 1883. The first president of Massachusetts Agricultural College at Amherst (1867); also president of the University of Wisconsin (1867-70), and of Williams College (1872-81). He was the author of "Natural Theology," etc.

Chæroneia, 10, 202

Chæroneia (the birthplace of the Greek biographer and moralist, Plutarch).—A city of Bœotia, in ancient Greece, on the borders of Phocis. The modern Káputna occupies the site of the ancient city and citadel, which rose from the plain about, and commanded the entrance from Phocis to Bœotia. The place was captured by the Athenians, 447 B. C., and again by Phalæcus during the Phocion war. Here also Philip in 338 B. C. by defeating the allied forces of the Athenians and Bœotians destroyed the separate autonomies of the Greek states. In 86 B. C., the generals of Mithridates were defeated here by Sulla. This battle, and those fought in 447 and 338 B. C., are among the famous engagements in history.

Chaffee, Adna R., 11, 470.

Chain, Engineer's, 13, 159.

Gunter's, 13, 159.

Length of a, 13, 147.

Chain, The Great.—A term used by geographers and surveyors in describing mountains and their related position and direction in mountain range or mountain chain. The latter denotes a series of contiguous mountain ranges, generally in parallel or consecutive lines or curves. On this continent, the great hill ranges or elevations take a general direction more or less parallel to the meridian, and follow the coast line on the west, with the break at the Isthmus, for about 8,000 miles. Mountain chains do not rise abruptly from the plain. They either form, on its one aspect, an extended gradually sloping surface, or bound an elevated plateau or tableland. Thus, what is termed the Andes of South America, whose western base is washed by the waves of the Pacific, gradually falls off on the east, forming the watershed of the Orinoco, Amazon, and La Plata. The Himalayas, on the other hand, whose southern slopes feed the tributaries of the Ganges and Indus, look northward

over the fertile plain of Tibet toward the great central plateau of Asia. The attempt is hence obviously difficult to estimate the real breadth of mountain chains. The vertical contour of a chain is usually very irregular, rising in parts into peaks, separated by gorges or valleys. What is specifically termed a chain of mountains, is that which consists of several parallel ridges, a configuration which on this continent occurs in the Alleghanies, but especially characterizes the Rockies and the Andes, which is commonly termed THE GREAT CHAIN.

Chain-bridges, 5, 419.

Chairs, Physical exercises with, 6, 38.

Chalcocite, 5, 210.

Chaldea (Babylonia).—A district in South Babylonia, on the Persian Gulf, inhabited by a people called the Chaldees or Chaldeans, probably of Semitic stock, who are known to have disputed with Assyria for the possession of Babylon. In the era of Sargon and Sennacherib, they were a warlike people, and in the 7th century B. C., when the Assyrian power began to wane, the Chaldeans were masters of the region, under Nabopolassar, and especially under his greater son, Nebuchadnezzar, Chaldea became supreme; and at this time, indeed, Chaldea and Babylonia became synonymous terms. To the Chaldeans Judah submitted, and was by them led, with his people, into exile. Later on in the history, when the government of Babylon had passed from the Semitic peoples, the Chaldeans became noted for their wisdom. It was then, however, that they became a caste rather than a nation. In the Old Testament, "the land of the Chaldees," watered by the Euphrates and the Tigris, bore also the name Babel, and Shinar (South Babylonia). The country (Chaldea or Babylonia) as a whole was bounded on the north by Assyria, on the south by the Syrian Desert and the Persian Gulf, on the east by Elam, and on the west by Syria or Palestine.

Chaldean philosophy, 10, 53.

star-worship, 10, 50.

Chaldeans, History of, 10, 181.

Home of the, 10, 48.

Chaleur (*shä-ler'*), **Bay of**.—An arm of the Gulf of St. Lawrence, between Gaspé and New Brunswick, Canada. The name was given to it by Jacques Cartier, who sailed into it in 1534. (Bay of Heat.)

Chalk-line, 7, 208.

Chalmers, Thomas.—(1780-1847.) A Scottish author and divine. Wrote on astronomy, political economy, and theology. Lived at Glas-

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- gow and St. Andrews, where he was professor of moral philosophy.
- Chalmers, Dr. Thomas**, 14, 12.
- Chalmette's Plantation (La.), Battle of**, 11, 220.
- Cham (käm).**—(1819-1879.) A French caricaturist, Comte Amédée de Noé, well-known for his illustrations in "Charivari."
- Cham**, Story of, in Arabic legend, 3, 231.
- Chamber of Deputies**, France, 10, 387.
- Chamberlain, Rt. Hon. Joseph**, Highbury, Birmingham, age 65; as a young man became member of Nettlefolds, the screw manufacturers, which quickly developed into the leading firm in its line in the world; retired from business when 38, threw himself into local politics as an advanced Radical, transformed Birmingham, of which he was 3 times mayor; was returned to Parliament for Birmingham in 1876, and 4 years later became pres. of Board of Trade in the Gladstonian Cabinet; in 1886 the Home Rule split caused him to ally himself with the Conservatives, at first disliked by them has become their real leader in the House of Commons; as Colonial Secretary, he helped on the federation of Australia, led the campaign that gave the S. African Republics to England, and did much to promote colonial enthusiasm and loyalty; his political hobbies are—social reform, closer relations with the Colonies, and cementing our friendship with America; a fierce fighter and hard hitter, he is perhaps the most worshiped, and certainly the best hated, of living statesmen.
- Chamberlain, Joseph**, 10, 383.
- Chamberlain, Joshua Lawrence**, 11, 470.
- Chambers, B. J.**, 12, 287.
- Chambers, Robert.**—(1802-1871.) A Scottish publisher and author, was joint-editor of "Chambers's Journal."
- Chambers, William**, 8, 57.
- Chameleon**, 4, 252.
American, 4, 253.
Characteristics of the Old World, 4, 252.
Habits of the, 4, 253.
- Chaminade, Cecile Louise Stephanie**, 9, 98.
- Chamis, The**, Introduction to Mohammed's biography, 3, 214.
- Chamois**, 4, 30.
- Chamomile**, 5, 55.
- Chamouni (shä-mōnē')**—A valley at the foot of Mont Blanc in Haute-Savoie, France. It is a celebrated resort of tourists setting out for Mont Blanc.
- Champ de Mars (shon'de märs')** (FIELD OF MARS).—A large public square in Paris, on the left bank of the river Seine, now used for military field manœuvres and public gatherings. It has played a prominent part in French history, particularly during the revolutionary era, when it was the scene of a celebration for the capture of the Bastille, the festival of the Supreme Being, and, in modern times, the site of the three chief international Expositions of 1867, 1878, and 1889. In Paris, the Champ de Mars has the significance of, and is somewhat akin to, the Campus Martius of ancient Rome.
- Champion's Hill (Miss.), Battle of**, 11, 470.
- Champlain, Lake.**—A lake separating the states of Vt. and N. Y.; the scene of several noteworthy events in the Revolutionary War. It was first discovered by Samuel de Champlain, in 1609. It is about 120 miles long by 10 to 12 miles wide.
- Champlain, Samuel de.**—(1567-1635.) A French navigator and explorer, who made explorations in Canada and New England in 1603, founded Quebec, 1608, discovered Lake Champlain, 1609. He died at the city of Quebec.
- Champlin, James Tift.**—Born, 1811; died, 1882. An American divine, president of Colby University (1857-72).
- Champs-Élysées (shon'zā-lē-zā')** (ELYSIAN FIELDS).—A place of public resort in Paris, consisting of the avenue and gardens extending from the Place de la Concorde to the Place de l'Étoile, a distance of 1¼ miles.
- Chancellorsville (Va.), Battle of**, 11, 471.
- Chandler, William Eaton**, 12, 222.
- Chandler, Zachariah**, 12, 222.
- Chandos, Duke of**, 9, 109.
- Chandra**, 10, 28.
- Chang Koe**, 10, 151.
- Chang-seang Wang**, 10, 150.
- Channel cat**, 4, 307.
- Channel Islands.**—A group of islands in the English Channel, from 7 to 30 miles from the coast of France. They consist of Jersey, Guernsey, Alderney and Sark, with a number of small islets. The prevailing language is Norman-French. Area, 75 miles. Pop. (1901), 95,841.
- Channing, Edward Tyrrel.**—Born at Newport, R. I., 1790; died at Cambridge, Mass., 1856. A noted American scholar, brother of William Ellery Channing, and one of the founders of the "North American Review" in 1815.
- Channing, William Ellery.**—Born at Newport, R. I., 1780; died at Bennington, Vt., 1842. An American clergyman and one of the chief founders of Unitarianism in America. He was for many years pastor of the Federal Street Church in Boston.

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- Chantilly** (Va.), **Battle of**, 11, 474.
- Chantrey**, Sir Francis Legatt, 9, 409.
- Chaou-lee-te**, 10, 151.
- Chaou-seang Wang**, 10, 150.
- Chapel car syndicate**, 8, 207.
- Chapel Hill**.—A town in N. C. and seat of the University of North Carolina, founded in 1789. Pop. (1900), 1,099.
- Chapel of the Cardinal**, Ceiling of the, 1, 217.
- Chaperon**, Duties of a, 1, 44.
When required, 1, 45.
- Chaperonage**, 1, 44.
- Chaplin**, Jeremiah.—Born at Rowley, Mass., 1776; died at Hamilton, N. Y., 1841. An American Baptist minister and first president of Waterville College, Me. (1821-33).
- Chaplin Hills** (Ky.), **Battle of**, 11, 474.
- Chapman**, Josephine Wright, on "Women as Architects," 7, 331.
- Chapu**, Henri, 9, 401.
- Chapultepec** (Mexico), **Battle of**, 11, 360.
- Character building**, 2, 381.
developed by expression, 8, 109.
Millionaires of, 14, 143.
Relation of growth to, 2, 91.
- Charcoal**, Properties of, 5, 176.
- Chares** (*kā'rēz*).—A sculptor who lived at Rhodes about 285 B. C. He was a sculptor of the Colossus of Rhodes, and the founder of the Rhodian school.
- Chargé d' Affaires**.—An inferior diplomatic agent, accredited not to a court but only to the Minister of Foreign Affairs, and holding his credentials from the same official in his own country. He usually acts while the ambassador is on leave.
- Chargé d' Affaires**, 12, 222.
- Charge of the Light Brigade**.—A poem by Lord Tennyson to commemorate the heroic charge at Balaklava, during the Crimean War.
- Charing Cross**.—A cross erected in London, on the south side of Trafalgar Square, between the Strand and Whitehall, the chief point of intersection of the omnibus lines and other traffic of the West End of the city. The term is derived either from the village of Cherringe, which stood here in the 13th century, or from the French term of endearment *chère reine* (dear Queen) applied to Eleanor, of Castle, wife of Edward I., who died near Lincoln in 1290, and was buried at Westminster. In every town through which Eleanor's remains rested on the way to London, the king caused a cross to be erected in her memory. It is said there were 14 of them in all, but only three remain. The London one was in 1647 demolished by order of the Long Parliament, though a model of it stands now in front of the Southeastern R. R. station in the Strand, in the city.
- Chariots**, in ancient times, were a kind of car or carriage, used in war or for pleasure. According to the Greeks, it was invented by Minerva; or, as another authority states, by Erichthonius (Erectheus), son of Hephaestus, a hero of Athens who had a chariot constructed so as to conceal his feet, which were those of a dragon:
"Seated in car, by him constructed first,
To hide his hideous feet."—*Orlando Furioso*.
- Charity**, the most practical of the virtues, 2, 195.
Training children in, 2, 195.
- Charivari**.—A French term (origin doubtful), used to denote a wild tumult and uproar, including not only a hubbub of noises, as howling, whistling, and shouting, but the clattering of kettles and pans, which in former times was raised on the occasion of an unequal marriage, the marriage of a widow, and which did not cease until money was paid to make peace. It was sometimes accompanied by violence to the unpopular person, and attempts were frequently made to put it down by both the Church and the civil power. In this country, the *charivari* is often directed in rural parts against newly married couples, but from the spirit of boisterous fun and good-will. Occasionally, newly elected representatives, mayors, and public officials, are made the objects of the noisy clamor and rough manifestations of popular acclaim. "Charivari" is the title of a comic paper published at Paris, France, and in England the London "Punch" is commonly alluded to as the English "Charivari."
- Charlemagne**, Life of, 10, 239.
- Charles I. of England**, 10, 319.
- Charles II. of England**, 10, 325.
takes away Dutch possessions, 11, 47.
grants charters for colonization, 11, 48.
- Charles III. of Spain**, 10, 340.
- Charles V. of Spain**, 10, 288.
- Charles VII. of France**, 10, 268.
- Charles VIII. of France**, 10, 270.
- Charles XII. of Sweden**, Life of, 10, 332.
referred to, 10, 331; 14, 102.
- Charles Albert of Sardinia**, 11, 2.
- Charles the Bold**, 10, 276.
- Charles Martel**, 10, 236, 238.
- Charles**, notable kings and emperors, List of, 10, 332.
- Charlesbourg Royal**, 11, 39.
- Charles's Law**, 5, 252.
- Charles's wain**, a constellation, 5, 135.

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- Charleston.**—Capital of Charleston Co., S. C. Its harbor is defended by Forts Sumter, Moultrie, and Castle Pinckney. It is one of the most important commercial cities in the South. It was evacuated by the Confederates in 1865. It suffered severely from an earthquake in Aug. 31, 1886. Pop. (1900), 55,807.
- Charlestown.**—Once a city, now a district, of Boston, separated from it by the Charles River. The points of interest are Bunker Hill Monument, a U. S. Navy Yard, and the state prison. It was burned by the British, June 17, 1775.
- Charlestown, 11, 77.**
- Charles Town.**—Capital of Jefferson Co., W. Va., is 8 miles from Harper's Ferry and 53 miles from Washington. On Dec. 2, 1859, John Brown was executed here; pop. (1900), 2,392.
- Charlottesville.**—In Albemarle Co., Virginia, 65 miles from Richmond; is the seat of the University of Virginia; pop. district (1900), 5,241.
- Charon.**—The ferryman who carried the souls of the dead over the rivers of the lower world. It was to pay the fee for this service that the Romans placed an obolus (a coin) in the mouth of the dead on burial.
- Charon, 10, 103.**
- Charta of Louis XVIII., 10, 366.**
- Charter, 12, 222; 13, 106.**
- Charter Oak, 11, 55.**
- Charter Party, 13, 106.**
- Chartered accountant, 13, 1.**
- Chartists.**—Political reformers in England in 1838 who advocated universal suffrage, abolition of the property qualification for a seat in Parliament, equal representation, annual Parliament, that members of Parliament be paid for their services, and vote by ballot. These demands formed "the People's Charter," and occasioned riots in several cities. After 1849 the Chartists disappeared as a party.
- Charybdis** (*ka-rib'-dis*).—A sea-monster in the Straits of Messina which three times a day sucked in the water and by discharging it again formed a dangerous whirlpool. She is represented as a beautiful maiden above and a fish-like monster below. Opposite her was Scylla, another monster. The passage between the two was attended with danger and difficulty. The expression "between Scylla and Charybdis" is a figurative one describing a dilemma or a perilous position.
- Charybdis, 3, 381.**
- Chase, Impeachment of Justice, 11, 199.**
- Chase, Philander.**—Born at Cornish, N. H., 1775; died at Robin's Nest, Ill., 1852. A missionary bishop of the American Episcopal Church. He was one of the founders of Kenyon College, O., and of Jubilee College, Ill.
- Chase, Salmon Portland, 12, 223.**
- Chase, Samuel, 11, 78.**
- Chase, William Merritt.**—An American painter of landscapes, portraits, and still life. He studied in New York, St. Louis, Germany, and returned to New York in 1878. He has been the recipient of marked honors at home and abroad. He was born at Franklin, Ind., in 1849.
- Chat, Yellow-breasted, 4, 186.**
- Châteaubriand** (*shä-tō-brē-on'*), **François René Auguste, Vicomte de.**—(1768–1848.) A celebrated French statesman and author. He traveled extensively in America in 1791–92, and the information gathered during that time furnished him with the themes for much of his writing.
- Chatham, Earl of.**—See PITT.
- Chattahoochee** (*chat-a-hö'chē*).—A river in Georgia, unites with the Flint and together they form the Appalachicola. It is 500 miles long, and is navigable 200 miles to Columbus.
- Chattanooga.**—A city in eastern Tenn., noted as a railway and commercial center, for its trade in lumber and grain, and for its manufactures of iron, steel, machinery, etc. It was a strategic point in the Civil War, and there was much hard fighting in its neighborhood. (See CHICKAMAUGA, MISSIONARY RIDGE, LOOKOUT MOUNTAIN.) Pop. (1900), 30,154.
- Chattel mortgages, 7, 448.**
- Chatterton, Thomas.**—(1752–1770.) An English poet celebrated for his precocious learning and his literary impostures. Committed suicide.
- Chatterton, Thomas, 14, 12, 23.**
- Chaucer, Geoffrey.**—(1340–1400.) An English poet, regarded as the father of English poetry. He had an early career as a soldier, visited Europe, and formed a friendship with Petrarch. The foreign influence upon his work is quite noticeable. The language in which he wrote is quite different from that of the present day, so much so that his works cannot be read without a glossary. His best-known work is "Canterbury Tales."
- Chaudet, Antoine Denis.**—French sculptor, 9, 400.
- Chaudière Falls.**—(1) On the Ottawa River in Canada. They are about 40 feet high.
(2) A cataract at the mouth of the Chaudière River, about 100 feet high.
- Chaumont, Treaty of, 10, 359.**
- Chauncy, Charles.**—Born in Hertfordshire, Eng., 1592; died, 1672. The second president of Harvard College. Before his emigration to

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- America, in 1638, he had been Vicar of Ware and professor of Hebrew and Greek in the University of Cambridge. He became pastor in Scituate, Mass., about 1641, and president of Harvard in 1654.
- Chauncey, Isaac**, 11, 220.
- Chautauqua**.—A summer resort on Chautauqua Lake, in western New York.
- Chautauqua Literary and Scientific Circle**.—An association originated and promoted in 1878 by Bishop John H. Vincent of the Methodist Episcopal Church, for home reading and study by its members. Its literary medium of communication is "The Chautauquan."
- Che Hwang-te**, 10, 150.
- Cheapside**.—The central thoroughfare of London, runs east and west. It was formerly an open common where markets were held.
- Cheatham, Benjamin Franklin**, 11, 473.
- Chebec, The**, 4, 199.
- Check-rein, Brutality of The**, 4, 14.
- Checkerberry**, 5, 15.
- Checkers or draughts**, 6, 86.
Specimen games of, 6, 92.
- Checks, Bank**, 13, 49.
Cashiers', 13, 241.
Certified, 13, 242.
Endorsement of, 7, 476.
Endorsing, 13, 49.
Form of, 7, 473.
How to draw, 7, 472.
Law on, 7, 471.
Numbering, 13, 50.
Stopping payment of, 13, 50.
to "order," 7, 474.
to "self," 7, 474.
- Chedorlaomer**, 10, 181.
- Cheerfulness The Great Life Tonic**, 14, 58.
- Cheese-making**, 5, 237.
- Cheese-mite**, 4, 321.
- Cheetah, The**, 4, 75.
- Cheiroptera or bats**, 4, 11.
- Cheliemen**, 10, 156.
- Chelsea**.—A city in Mass., noted for its manufactures of tiles, pottery, etc. It was incorporated as a city in 1857. Pop. (1900), 34,072.
- Chemical change defined**, 5, 151.
combination, 5, 159.
compound, 5, 159.
equations, 5, 172.
formulas, 5, 171.
nomenclature, 5, 173.
- Chemist, Opportunities for a trained**, 5, 251.
- Chemistry**, 5, 149.
an occupation for women, 7, 431.
applied to the useful arts, 5, 250.
defined, 5, 149.
Definitions of terms in, 5, 149.
- Chemistry—Continued.**
Meaning of symbols, 5, 171.
of bread-making, 5, 240.
of earthenware, 5, 214.
of fermentation, 5, 234.
of leather and tanning, 5, 244.
of paper-making, 5, 237.
of photography, 5, 213.
Organic, 5, 224.
- Cheng-Fuen, Battle of**, 10, 163.
- Chenille carpets**, 1, 33.
- Cheops, King**, 10, 179.
- Cephren**, 10, 179.
- Cherimoyer of Peru**, 4, 475.
- Cherokee Indians**.—They are of Iroquois stock and are civilized and industrious. There are 17,000 in the Ind. Ter., and 2,000 in N. C. Cherokee Indians were valuable allies of Jackson's army in the War of 1812.
- Cherry**, 4, 470.
a decorative wood, 1, 37.
bird, 4, 196.
Black, 4, 471.
brandy, 4, 471.
Choke-cherry, 4, 472.
for wood-carving, 7, 216.
Wild red, 4, 471.
- Cherry Valley (N. Y.), Massacre of**, 11, 78.
- Chersonesus** (*kér-sō-nē'sus*).—The Greek name for any peninsula and has been applied to several peninsulas, but in its especial significance the peninsula of Gallipoli between the Hellespont and the Gulf of Melas is understood.
- Cherubini**, 9, 99.
- Chesapeake, The**, 11, 220.
- Chess, Hints to beginners**, 6, 83.
Laws of, 6, 81.
- Chest, Exercises for the**, 6, 21.
- Chester**.—An ancient, historic city in England, capital of West Cheshire, situated on the river Dee, 16 miles southeast of Liverpool, 180 miles northwest of London, and twenty miles from the sea. It is the Roman Castra and Deva and the Welsh (Celtic) Caerleon. Chester was an important Roman military station, was destroyed by Æthelfrith of Northumbria in 607 and afterward rebuilt. It fell before William the Conqueror in 1070, and besieged by the Parliamentarians and taken by them in 1646. It has a fine cathedral, which dates back to medieval times, and has of recent years been restored. It is most interesting alike to architects and antiquarians.
- Chester**.—A city in Pa., especially noted for its shipyards, and also for its manufacture of cottons and woollens. The first settlement was made by Swedes in 1643. Pop. (1900), 33,988.
- Chesterfield, Lord**, 14, 199.

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Chestnut, 4, 450.

American, 4, 450.

Dwarf, 4, 451.

Rock, 4, 464.

Swamp, 4, 464.

Chestnut-sided warbler, 4, 186.

Chest-Weights, Exercises with the, 6, 30.

Cheves, Langdon, 11, 221.

Chevy Chase.—A famous old English ballad, contained in "Percy's Reliques," which sets forth the battle of Otterburn.

Cheyenne.—The capital of Wyo., 6,000 feet above the level of the sea. It is a railway center and the headquarters of large cattle companies. Pop. (1900), 14,087.

Cheyenne Indians.—They are of Algonquin stock, and at the beginning of the last century dwelt in the Black Hills and on the banks of the Platte and Cheyenne rivers. In 1825 they made a treaty of peace with the U. S., some going to the Tongue River Reservation, Mont., where they gave no trouble, and some going south, where they fought soldiers and settlers and finally became involved in war with the U. S. in 1861. Hostilities lasted three years and in 1864, while peace negotiations were pending, Col. Chevington, who was not aware of this fact, descended on the Sandy Creek village and slew one hundred Cheyennes. A campaign of slaughter followed, and continued until 1865, when the savages, with the exception of a comparatively small number who did not yield until 1867, went to a reservation. The Cheyennes number about 3,000, most of whom are at the Pine River Agency, S. D.

Chicago.—The chief city of Ill., situated on Lake Michigan, and the second largest city in the U. S. It is a large railway center and its exports of grain are larger than those of any other city in the world. Its chief and largest industries are beef and pork packing, while its extensive manufactures include lumber, iron, steel, clothing, tobacco, leather, agricultural implements, etc. It contains a university, several theological and other educational institutions and also important libraries and art collections. The most important event in its history, was the World's Columbian Exposition in 1893, which lasted from May 1 to Oct. 30. In 1871, it was visited by a great fire, resulting in a loss of property amounting to \$190,000,000; 20,000 buildings were burned. It was incorporated as a city in 1837. Pop. (1900), 1,698,575.

Chicago Railway Strike Riots.—See CLEVELAND, GROVER.

Chicago Riots.—See CLEVELAND, GROVER.

Chicago University.—A noted institution of learning in Chicago, enriched by an endowment of \$7,000,000 by J. D. Rockefeller and others. Its students number about 3,500, with 300 instructors. Its library contains 350,000 volumes.

Chicago Indian Massacre, 11, 221.

Chicaree, 4, 58.

Eggs of the, 4, 114.

Nest of the, 4, 114.

Chickahominy.—A Virginian river which flows into the James about 40 miles from Richmond. Near it was fought the battles of Frayser's Farm, Savage's Station, Gaines's Mill, Mechanicsville, and Fair Oaks in 1862, and of Cold Harbor in 1864.

Chickamauga, 11, 473.

Chickamauga, Rock of.—A sobriquet applied to Gen. George H. Thomas for his stubborn defense of his position at the battle of Chickamauga.

Chickasaw Bluffs, Battle of, 11, 474.

Chickasaw Indians.—In the 18th century they dwelt almost wholly in the territory now embraced in the states of Miss. and Tenn. In 1800 many of them settled in Ark. In the Colonial wars they sided with the English against the French, and in 1739 established amicable relations with the people of Ga. In 1765 they formally began trade intercourse with the settlers and with the Choctaws at Mobile. During the early Indian difficulties with the government they were either neutral or aided the latter. By the end of 1818 they had ceded all their lands east of the Mississippi, and in 1832 and 1834 they parted with the remainder and made their homes with the Choctaws, from whom they were separated in 1855. In the Civil War they aided the Confederacy for a brief period. The Chickasaws number about 3,500.

Chickenpox, Treatment of, 1, 346.

Chickory, 5, 55.

To detect in coffee, 5, 55.

Chicopee.—A town in Mass., near Springfield. Its chief manufactures are cotton goods, arms, cutlery, etc. Pop. (1900), 19,167.

Chignecto Bay.—A bay at the head waters of the Bay of Fundy, between New Brunswick and Nova Scotia, Canada. The tide rises here to a height of between 50 and 60 feet perpendicularly.

Chihuahua (*chē-wä'wä*).—The name of both a state and a town of northern Mexico. The state has a population of nearly 250,000, and the town numbers about 25,000.

Chilblains, Treatment of, 1, 341.

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Chilcat.—A tribe of Indians who inhabit the country around Chilcat Bay and River and Chilcoot River in Alaska. They number less than 1,000.

Child, Francis James.—Born at Boston, Mass., 1825; died, 1896. Professor of English literature, rhetoric, and oratory at Harvard College (1851–1876). He published a collection of "English and Scottish Ballads," in 8 vols. (1857–59).

Child, Lydia Maria Francis.—Born at Medford, Mass., 1802; died at Wayland, Mass., 1880. An ardent supporter of the Abolitionist movement. She edited the "National Anti-slavery Standard" and wrote "The Rebels," "The American Frugal Wife," "Flowers for Children"; also "Appeal for That Class of Americans Called Africans" which excited much notice and comment.

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Childermas, 13, 101.

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Chilblains, Treatment of, 1, 341.

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- Awakening of the senses of, 9, 5.
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- Development of the voices of, 9, 15.
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- Muscles, Strengthening the waist, 9, 17.
- Listening, Value of, 9, 20.
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Children, Kindergarten occupations, 7, 27.

Childs, George William.—Born at Baltimore, Md., 1829; died at Philadelphia, 1894. He was noted for his enterprise as a publisher and his benevolence as a philanthropist. He published the "Public Ledger," newspaper in Philadelphia from 1864 to 1894.

Chili.—A South American republic between the Andes and the Pacific, extending from the south of Bolivia to Cape Horn. Nitrate and mining and agricultural products are the chief articles of export. Area, 290,829 sq. miles; pop. 3,100,000. Capital, Santiago, pop. (1900) 320,000.

Child-training, defined, 2, 457.

best conducted in the home, 2, 448.

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Chillon (*shē-yon'*).—A castle on the eastern end of Lake Geneva, in Vaud, Switzerland. It is celebrated in story and song as the prison of Bonnivard (1530–1536), the defender of liberty against the Duke of Savoy. Bonnivard was Byron's "Prisoner of Chillon."

Chiltern Hundreds.—Under English law no member of Parliament may resign his seat unless he has accepted some place of honor and profit in the gift of the crown or for other cause. When other cause is wanting, he may be appointed to the stewardship of the Chiltern Hundreds, which qualifies him for resignation. The office originally charged the holder with the suppression of robbers in the Chiltern Hills. The chancellor of the exchequer appoints the member. Chiltern is in Buckingham-

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- shire. Hundred is an old Teutonic division of land or people.
- Chimaera**, 10, 111.
- Chimborazo**.—A lofty mountain peak in Ecuador, in the Andes, just south of the equator and near Quito, 20,498 feet high.
- Chimney swift**, 4, 193.
- Chimpanzee**, 4, 64.
 "Mr. Crowley," 4, 64.
 Taming the, 4, 64.
- Chin-nung**, 10, 148.
- Chin-tsung**, 10, 154.
- Chin-tung**, 10, 158.
- China**.—An empire in eastern Asia noted for its high mountain ranges, elevated plateaus and long rivers. The country is mainly agricultural and produces wheat, Indian corn, cereals, rice, sugar, opium, and tea. Area, 4,218,401 sq. miles; pop., 402,680,000. Capital, Peking, pop., 1,000,000.
- China, Dowager Empress of, Tzu-Hszi**, was the daughter of poor parents, sold into slavery in childhood, and was made secondary wife to the emperor; became Regent of the Empire on the death of her son, the Emperor Hien-Feng, and administered the national affairs for 15 years during the minority of Kuang-Hsu, which ended in 1889. In 1898 she virtually dethroned Kuang-Hsu because of his reforming proclivities, and reigned with absolute power until the disturbances of 1900.
- China, Emperor of, Kuang-Hsu** (1862-); is the nephew of Hien-Feng, whom he succeeded in 1875; after attaining his majority was much influenced by Kang-Yu-Wei, a reformer whose pace was much too fast for the general Chinese opinion. His reforming edicts led to the usurpation of the supreme power, Sept. 21, 1898, by the Dowager Empress, who has kept him, in a great measure since that time, in merely nominal power.
- China and Japan, War between**, 11, 28.
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- China-painting**, occupation for women, 7, 409.
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 Instruction in, 1, 210.
 Materials required for, 1, 210.
 Mixing colors, 1, 212.
- China silk curtains**, 1, 36.
- Chinch-Bug**, 4, 358.
- Chincha Islands**.—Three small islands long noted for guano deposits, which are now exhausted. These are off the coast of Peru, a short distance south of Callao, in the department of Lima.
- Chinese ancestor worship**, 10, 35.
 emperor dethroned, 11, 30.
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- Ching Che-tung**, 10, 159.
- Chinkapin**, 4, 451, 466.
- Chios** (*kí'os*), or **Scio**.—An island in the Ægean Sea, off the west coast of Asia Minor. It played an important part in ancient Greek history.
- Chipmunk**, 4, 58.
- Chippewa Falls**.—A city on the Chippewa River, in Chippewa Co., in western Wisconsin. Lumber is the chief commodity. Pop. (1900), 8,094.
- Chippewa Indians**.—Of the Algonquin stock, they are sometimes called Ojibwas. They had lodges between Lakes Huron and Superior and N. D. They were allies of the British during the Revolution, but made peace with the U. S. in 1785 and 1789. When combined with the Ottawas and Pottawottomies, the confederation was known as the Three Fires. They participated in the Miami rising against the whites and made another treaty of peace in 1795. This they broke in 1812, but submitted to the government again in 1816, when they ceded all their lands in Ohio. Other cessions were made, and now the 30,000 Chippewas who remain dwell west of the Mississippi and in Canada.
- Chipping sparrow**, 4, 172.
- Chiron**, 10, 105.
- Chiron, the centaur**, 10, 108.
- Chisel**, 7, 166.
- Chisholm vs. Georgia**.—This case resulted in the adoption of the eleventh amendment to the Constitution. In 1792 Alexander Chisholm brought suit in the U. S. Supreme Court against the state of Ga., to compel payment of a private claim, his counsel holding that the court had

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- power and jurisdiction under Section 2, Article III., of the Fundamental law. The court took this view, gave judgment for Chisholm and issued a writ of inquiry, which was never enforced, as Ga. at once passed an act making death the penalty for executing such an instrument.
- Chittagong fowl**, 4, 106.
- Chitty, Joseph**.—(1776–1841.) A noted English barrister and writer. His works are considered standards in the study of law.
- Chivalry**, Influence on the home, 1, 6.
- Chloral hydrate**, 5, 230.
- Chloride of lime**, 5, 188.
- Chlorinated lime**, 5, 188.
- Chlorine** (Greek, *chloros*, signifying pale green).—One of the non-metallic, and under ordinary conditions gaseous, elements occurring in nature in combination with metals. Chloride of sodium (common salt) is its most abundant compound; it is soluble in water, and forms with that liquid, at a temperature of 0° C., a crystalline compound; it condenses to a yellow liquid, under a pressure of four atmospheres, but the liquid is never frozen. Chlorine has an affinity for hydrogen, and forms with it an important compound, called hydrochloric acid. It is used largely for bleaching purposes, and is an ingredient in bleaching powder. Diffused in small quantities in the air, it is a good disinfectant. Its atomic weight is 35.5.
- Chlorine**, Acids formed from, 5, 189.
a disinfectant, 5, 188.
group of chemical elements, 5, 185.
Properties of, 5, 185.
- Chloroform**.—A valuable anæsthetic, obtained by distilling a mixture of water, lime, chloride of lime (bleaching powder), and alcohol, when it passes over, along with water, and is caught in the receiver. It is next washed with water to remove the alcohol, and later with a solution of carbonate of potash; it is then dried with chloride of calcium and rectified. When rectified, it is a colorless, volatile liquid, with an agreeable, ethereal odor, a sweet but slightly acid taste. It is a good solvent of resin, gutta-percha, iodine, bromine, and the alkaloids. By its effect upon the nervous system, when used as an anæsthetic, chloroform causes a suspension of voluntary motion and of sensation, while respiration and the action of the heart are continued. Care should be taken, however, in administering it.
- Chloroform**, 5, 229.
- Chlorophyll**, 4, 392.
- Chlorplatinic acid**, 5, 223.
- Choate, Joseph H.**, on intellectual development in city and country, 8, 99.
referred to, 12, 182, 229.
- Choate, Rufus**, 11, 360; 14, 8, 190, 226.
- Chocolate**.—The ground seeds of *Theobroma Cacao* (see COCOA) made into a paste and mixed with sugar and various spices, and then formed into molds and allowed to harden. It is eaten either solid, or dissolved in hot water, and then taken like tea, coffee, or cocoa. When pure (for it is often adulterated and perniciously so) it is a nourishing as well as an agreeable beverage. As a sweetmeat it is used extensively, and forms a wholesome and palatable confection.
- Chocolate**, 4, 484.
- Choctaw Indians**.—They are of Muskhogean stock, and in their prosperous days dwelt on lands bordering on the Gulf of Mexico. They declared allegiance to the U. S. in 1786 and rendered effective service in the Wars of 1812 and with the Creeks. In 1820 they accepted territory west of Ark. for part of their lands, and in 1830 they ceded the remainder and migrated west. They number 18,000, of whom 10,000 are of pure blood, and nearly all reside in Ind. Ter.
- Choke-cherry**, 4, 472.
- Cholera**.—A specific, infectious disease of two types, simple and malignant, occurring at periods in an epidemic form, and caused, as is now inferred, by what is known as the comma bacillus, discovered by Dr. Koch. The disease, however it arises, is chiefly propagated by the contamination of water used for drinking, cooking, and washing, by the contamination of articles of food, and possibly by the superficial inhalation and subsequent swallowing of particles of dust containing the comma bacillus. The chief symptoms, in well-marked cases of the disease, are vomiting and purging, occurring either together or alternately. The seizure is usually sudden and violent, and, in unfavorable cases, especially where the disorder is epidemic, death may result within forty-eight hours. Malignant cholera is of frequent occurrence in Asiatic countries, particularly in India, where it often becomes epidemic, even in spite of the strictest sanitary precautions. It is no stranger in Europe, especially at the chief seaports of the continent, such as Hamburg, Havre, etc., showing the need of strict quarantine regulations and their rigid enforcement at our own ports of entry. It may occur at any season of the year, though more prevalent in the hot season, and in low-lying districts, with a shallow, porous soil where the infecting matter

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- seems to breed cholera germs. As a preservative, inoculation may be considered to have passed the experimental stage, and to have become a reasonably safe guarantee against the prevalence of cholera in epidemic form. This has been proved abundantly on the tea plantations in India, where the dire disease periodically appears.
- Chonos Archipelago** (*chō'-nos*).—A group of small islands, about 120 in number, off the coast of Chili.
- Choo Yuen-chang**, 10, 157.
- Chopin, Frederic François**, 9, 100.
- Chouteau, Auguste**, 11, 221.
- Chow dynasty**, 10, 148.
- Christian**.—The name of nine kings of Denmark, or of Denmark and Norway.
 Christian I. (1426-1481) reigned 1450-1481.
 Christian II. (1481-1559) reigned 1513-1523.
 Christian III. (1502-1559) reigned 1534-1559.
 Christian IV. (1577-1648) reigned 1588-1648.
 Christian V. (1646-1699) reigned 1670-1699.
 Christian VI. (1699-1746) reigned 1730-1746.
 Christian VII. (1749-1808) reigned 1766-1808.
 Christian VIII. (1786-1848) reigned 1839-1848.
 Christian IX. (1818-) reigned 1863-.
- Christiana case**, 11, 360.
- Christiania**.—The capital of Norway; is the chief city and seaport. It is situated on Christiania Fjord. Founded in 1624 by Christian IV., after whom it was named; pop. (1900), 225,686.
- Christianity in Europe**, Spréad of, 10, 260.
 Influence on the home, 1, 6.
 introduced into Europe, 10, 405.
- Christmas cards**, Designing and painting, 7, 404.
 day, 13, 94.
- Chromium** (Greek, *chroma*, color).—A metal, known to mineralogists as red-lead, a compound of chromium with lead and oxygen. Its most abundant ore is chrome iron, a compound of its oxide with oxide of iron. For commercial purposes it is manufactured by subjecting chrome iron (previously reduced to a fine powder) to a strong heat, with a mixture of carbonate of potash and nitrate, in a reverberatory furnace. After a lengthy process of fusion, the resulting mass is broken up and treated with boiling water, when chromate of potash is dissolved out. By a further process, the chromate is converted into bichromate of potash ($K_2O_2CrO_3$).
- Chromium**, Properties of, 5, 222.
 Salts of, 5, 222.
- Chromule**, 4, 392.
- Chronology**, Hindu religious, 10, 7.
- Chrysanthemum**, 5, 56.
 national flower of Japan, 1, 201.
- Chrysanthus**, 14, 378.
- Chryses**, priest of Apollo, 3, 368.
- Chrysor**, 10, 81.
- Chrystler's Field** (Canada), Battle of, 11, 221.
- Chub**, 4, 302.
- Chuck-Will's-widow**, 4, 156.
- Chundun Rajah**, Hindu fairy tale, 3, 17.
- Chung-tih**, 10, 158.
- Chung-tsung**, 10, 153.
- Church and State**, 12, 230.
- Church, Benjamin**.—Born at Duxbury, Mass., 1639; died at Little Compton, R. I., 1718. He took an active part in King Philip's war (1676); from his notes and papers his son compiled "Entertaining Passages Relating to Philip's War" (1716).
- Church, Frederick Edwin**, 9, 330.
- Church, Sanford Elias**, 12, 230.
- Church, Trinity**, New York, 9, 422.
- Churchill, John**.—(1650-1722.) The first Duke of Marlborough. A famous general and statesman. He participated in the military victories of Blenheim (1704), Ramillies (1706), Oudenarde (1708), and Malplaquet (1709). By a change of government he lost his command in 1711.
- Churchill, Lady Randolph** (MRS. GEORGE CORNWALLIS WEST).—35a, Great Cumberland Place, W. London; as Miss Jennie Jerome of New York, married Lord Randolph Churchill in 1874; her second marriage was one of the events of the 1900 London season; owns and edits the "Anglo-Saxon Review," a guinea quarterly. Vice-pres. Ladies Grand Council Primrose League, Pres. of American Hospital Ship "Maine" Committee.
- Churchill, Randolph Henry Spencer** (LORD RANDOLPH CHURCHILL).—(1849-1895.) An English statesman who occupied several cabinet positions during his career. Under Lord Salisbury's administration he was chancellor of the exchequer and leader of the House of Commons (1886). He married Miss Jerome of New York in 1874.
- Churchill, Winston Spencer, M. P.**.—105, Mount St., W. London; a soldier at 19, he became world famous at 27 years; saw Spanish campaign in Cuba, and served as officer through Indian frontier wars; in Sudan campaign, 1898, took part in the Lancers' charge at Om-

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- durman, and has put his experiences into literature, his best book, "The River War." Won great laurels in the Boer War, especially by his brave defense of an armored train and his escape from Pretoria.
- Churchill, Winston.**—American novelist, author of "The Celebrity," "Richard Carvel," and "The Crisis," was born at St. Louis, Mo., Nov. 10, 1871. He was for a time managing editor of "The Cosmopolitan Magazine," New York.
- Churchill, Winston,** Advice to young writers, 8, 233.
- Churchill River.**—A river in Canada flowing through several lakes in its course, empties into Hudson Bay after a course of about 700 miles.
- Churubusco (Mexico), Battle of,** 11, 360.
- Cibber, Colley.**—(1671-1757.) A noted English actor and dramatist. Appointed poet-laureate in 1730.
- Cibber, Mrs. Susannah Maria Arne.**—(1714-1766.) A famous English actress and singer; daughter-in-law of Colley Cibber.
- Cibber, Theophilus.**—(1703-1758.) An English actor and dramatist, son of Colley Cibber.
- Cicadas, 4, 361.**
 Characteristics of the, 4, 361.
 Habits of the, 4, 362.
 Seventeen-year, 4, 362.
- Cicero, Marcus Tullius, 10, 219.**
- "Ci-devants," 10, 345.**
- Cid, Life of the, 10, 243.**
- Cilley, Jonathan, 11, 361.**
- Cimabue, Giovanni.**—(1240-1302.) A famous Italian painter, in decorative lines. He is called "The father of modern painting."
- Cinchona.**—A genus of trees or evergreen shrubs, native to the valleys of the Andes, yielding the valuable medicine known to commerce as cinchona, Peruvian, or Jesuits' bark. As a tonic and remedy for fever, owing to the presence of alkaloids, such as quinia, etc., the cinchona is of great importance. The drug is administered in grains in the sulphate or bisulphate of quinine, or in the form of its alkaloid quinine. It is found valuable also as an antiseptic and typical astringent, in addition to its antiperiodic febrifugal and tonic properties.
- Cinchona, 4, 485.**
- Cincinnati.**—The capital of Hamilton Co. and the largest city in Ohio; known as "The Queen City." It was founded in 1788 and incorporated as a city in 1814. Its river and railway traffic is very large. Its extensive manufactures embrace iron, furniture, malt, and distilled liquors, etc. Pop. (1900), 325,902.
- Cincinnati, Society of the, 11, 78.**
- Cincinnatus, Lucius Quinctius.**—(519-430? B. C.) A hero of Rome whose life is surrounded by legend. In 458 B. C., in a crisis, when the Roman army was hemmed in a defile by an opposing army of Æquians, he was appointed dictator by the senate. When the messengers went to inform him of his appointment he was found digging in his field. He held office for 16 days. During which time he completely defeated the Æquians. He then retired to his farm, and a simple life. He was again appointed dictator at the age of eighty.
- Cinderella, or the little glass slipper, 3, 65.**
- Cineraria, 5, 32.**
- Cinna, 10, 219.**
- Cinnabar, 5, 211.**
- Cinnamomum camphora, 4, 484.**
- Cinnamon.**—The inner bark of a small evergreen tree, with a delicate aromatic odor, found in Ceylon and at Colombo. It is chiefly used in cooking as a condiment and flavoring material, and also in the preparation of some kinds of chocolate and liquors. In medicine it is used for counteracting the griping action of purgatives. Cassia, the product of a much inferior bark than cinnamon, is sometimes substituted for the latter, and with unsatisfactory results. The Ceylon cinnamon is most highly praised, being of a fragrant odor, and having a sweet, pleasant, aromatic taste.
- Cinnamon, 4, 484.**
- Cipher.**—In arithmetic, the character 0, which standing by itself expresses nothing, but when placed to the right of a number, say 25, increases its value tenfold. It is now loosely applied, also, to any of the nine figures. Metaphorically, its primary meaning (a cipher) denotes a nonentity, or nobody. The cipher is used also to designate the interweaving of the initials of a name, as a monogram, or private mark; and the term has, moreover, come to be a name for secret writing, in the transmission of dispatches, the reading of which is known only to the initiated.
- Cipher, 13, 106.**
- Cipher Code, 13, 107.**
- Cipher Dispatches, 12, 230.**
- Cinquefoil, 5, 24.**
- Cinque Ports (French, Five Ports).**—A collective name for the five chief ports in the English Channel—Dover, Hastings, Sandwich, Hythe, and Romney. To these were added later the ports of Rye and Winchester, all being governed by a lord-warden, who furnished the English naval contingents up to the time of Henry VII. Their special privileges have been abolished, though they were once con-

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- siderable, in consideration of the several ports furnishing a certain quota of ships of war, for the king's use, when demanded.
- Circassia.**—A region in the Caucasus, incorporated with Russia in 1829.
- Circe.**—In Greek mythology, an enchantress, who dwelt in the Island of *Ææa*.
- Circle.**—In geometry, a plane figure bounded by an inclosed or curved line, which is everywhere equidistant from a point within it called the center. Any line drawn through the center, and terminated by the circumference, is a diameter. The distance from the center to the circumference is called the radius, and any two radii which together form a straight line constitute the diameter. In astronomy, the term "great circle" denotes those circles which divide the celestial sphere into two equal parts, as the equator and the meridian. A circle of latitude is one perpendicular to the plane of the ecliptic; in spherical projection, it is a small circle of the sphere whose plane is perpendicular to the axis. In logic, to argue *in a circle* is to reason inconclusively.
- Circle, Degrees in a, 5, 108.**
To find the area of a, **13, 151.**
circumference of a, **13, 151.**
- Circles, Great, 5, 109.**
- Circular measure, 13, 148.**
- Circulatory system, 1, 280.**
- Circumference of a circle, To find the, 13, 151.**
an ellipse, To find the, **13, 151.**
- Circumlocution Office.**—In Dickens's "Little Dorrit," a bit of satire directed against the red tape methods of the public-office system in England.
- Citizen and the Public Man, The, 12, 411.**
- Citizen and voter, 12, 426.**
Duties of the, **12, 426.**
- Citric acid, 5, 232.**
Source of, **5, 2.**
- Citron, 5, 3.**
- Citrullus vulgaris, 5, 73.**
- Citrus aurantium, 4, 472.**
medicus, **5, 2.**
- City of a Hundred Towers.**—A name given to Pavia, Italy.
- City of Brotherly Love.**—A name applied to the city of Philadelphia.
- City of Churches.**—Brooklyn, New York, is so called because of its many churches.
- City of Elms.**—New Haven, Conn., so called from the large number of elms which shades its streets.
- City of Magnificent Distances.**—A designation of Washington, D. C., owing to its wide avenues and fine vistas, and its widely separated public buildings.
- City of Oaks.**—Raleigh, N. C., because of the numerous oak trees which shade its streets and avenues.
- City of the Straits.**—Applied to Detroit, Mich., because of its geographical position on the water course between Lake Huron and Lake Erie.
- City or Country? The better place, 8, 97.**
- City Point.**—A small town in Va., on the James River. In the Civil War it was used as a base of supplies, especially by Gen. Grant during the operations of 1864-65 against Richmond and Petersburg.
- Civil Engineering,** by William Barclay Parsons, **13, 435.**
- Civil Rights Act.**—A law enacted in 1866, the purpose of which was to secure civil rights and privileges, equal to those of the whites, to negroes in the U. S. It provided that all persons born in the United States, except subjects of foreign powers and Indians not taxed, should be recognized as citizens, with all the civil rights thereof. The consideration of cases growing out of the violation of this law was reserved wholly for the Federal courts. The law was substantially embodied in the fourteenth amendment to the Constitution, and other legislation was subsequently adopted to facilitate its enforcement. Among the better known cases tried under the law were those of the U. S. *vs.* Stanley, U. S. *vs.* Ryan, U. S. *vs.* Nichols, U. S. *vs.* Singleton, and Robinson and wife *vs.* Memphis and Charleston Railroad Co. Nichols and Stanley were indicted for refusing to receive negroes as guests at hotels, and Singleton and Ryan for declining to admit them to a theater. Robinson sued because his wife had been excluded from a ladies' railway coach. In the Ryan and Robinson cases, judgment was for the plaintiff, on the ground that first and second sections of the fourteenth amendment to the Constitution had been violated. In the other cases the court held certain provisions of the civil rights act of 1875 to be null and void, and found in favor of the defendants.
- Civil Service, Age limitation of the, 13, 364.**
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- Civil War,** Loss of life in the, 11, 433.
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in the United States, 11, 430.
- Claims, Court of,** 12, 241.
- Clam,** 4, 373.
Characteristics of the, 4, 373.
- Clapper rail,** 4, 131.
- Clare.**—A county of Ireland, lying between Galway, Tipperary, Limerick, and the Atlantic Ocean. Area, 1,294 sq. miles.
- Clarendon, Constitutions of.**—The ordinances adopted at the Council of Clarendon, which see.
- Clarendon, Constitutions of,** 10, 261.
- Clarendon, Council of.**—A council called forth in 1164 through the opposition of Thomas Becket to Henry II. in ecclesiastical matters. The council included the King, the archbishops of Canterbury and York, eleven bishops, and numerous members of the nobility; its object was the establishment of rules for the punishment of the "criminal clergy" and for the settlement of quarrels arising between the clergy and laity.
- Clarendon, Council of,** 10, 261.
- Clarissa Harlowe.**—The title of a famous novel by Samuel Richardson, published 1748.
- Clark, Abraham,** 11, 78.
- Clark, Alvan,** 12, 230.
- Clark, William,** 11, 221.
- Clarke, Charles Cowden.**—(1787-1877.) A noted English writer, publisher, and lecturer.
- Clarke, Mrs. Charles Cowden.**—(1809-1898.) Wife of Charles Cowden Clarke, the noted writer and lecturer. An English Shakesperian scholar, compiler of "The Complete Concordance of Shakespeare" published in 1846.
- Classified service in the civil service,** 13, 362.
- Claude Lorrain.**—(1600-1682.) A celebrated French landscape painter; his real name was Claude Gelée.
- Clavichord, Well-tempered,** 9, 83.
- Clavicles or collar-bones,** 1, 273.
- Clay,** 5, 442.
as a plaything for children, 2, 124.
- Clay, Cassius Marcellus,** 12, 230.
- Clay, Green,** 11, 222.
- Clay, Henry,** 11, 209, 299.
- Clay, Modeling in,** 7, 91.
- Clay-modeling,** a kindergarten occupation, 7, 54.
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- Clayton, John Middleton,** 11, 361.
- Claytonia Virginica,** 5, 44.
- Cleanliness** a safe-guard against impurity of children, 2, 279.
Habit of, 2, 461.
- Clearance,** 13, 107.
- Clearchus** (*klē-är'kus*).—(Died 401 B. C.) A Spartan general.
- Clearing House,** 13, 107.
- Cleburne, Patrick R.,** 11, 474.
- Cleisthenes,** 10, 194.
- Clematis,** 5, 56.
- Clemens, Leslie F.,** on the Koran, 3, 389.
- Clemens, Samuel L.,** Life of, 8, 324.
on "Getting and Keeping a Position," 13, 70.
- Cleobis and Biton,** 10, 88.
- Cleomenes I.**—King of Sparta, 519-491 B. C.
- Cleomenes III.**—King of Sparta, 236-220 B. C.
Defeated in war with the Achæan League and Macedonia, 221 B. C.
- Cleomenes III.,** 10, 207.
- Cleon.**—An Athenian demagogue who became leader of the democratic party after the death of Pericles. Killed at Amphipolis, 422 B. C.
- Cleon,** 10, 200.
- Cleopatra, Queen of Egypt,** 10, 394.
- Cleopatra.**—See WOMEN WHO HAVE INFLUENCED HISTORY.
- Cleopatra's Needles.**—Egyptian obelisks, of pink granite of about equal height (67 and 68½ feet respectively), which were transported from Heliopolis (Baalbec) on the Nile in Lower Egypt, to Alexandria, in the 18th year of Augustus, and set up in front of the temple of Cæsar. They are covered with hieroglyphics, referring to the reigns of kings as remote as the 14th and 16th centuries B. C. One of the obelisks, weighing 186 tons, was in 1878 brought from Alexandria to London and erected on the Thames Embankment; the other, two years later, was brought to New York and now stands in Central Park.
- Clergy, Benefit of the,** 10, 261.
Celibacy of the, 10, 260.
- "Clermont,"** steamboat, 8, 212.
perfected by Fulton, 5, 281.
- Cleveland.**—Capital of Cuyahoga Co., Ohio. It exports large quantities of coal and has extensive iron and steel manufactures and several oil refineries. It is the first city in the State and the seat of Adelbert College, Case School of Applied Science, and medical colleges. It is also a great railroad and steamboat center. It was settled in 1796 and incorporated as a city in 1836. Pop. (1900), 381,768.

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Nest of the, 4, 120.

Climb, Teaching a child to, 2, 85.

Climbing, Danger to children in, 2, 84.

Clinton.—1. A city in Iowa, with an extensive lumber trade. Pop. (1900), 22,698. 2. A town in Worcester Co., Mass., noted for its manufactures. Pop. (1900), 13,667. 3. A village in Oneida Co., N. Y., the seat of Hamilton College. Pop. (1900), 1,340.

Clinton, De Witt.—Born at Little Britain, N. Y., 1769; died at Albany, N. Y., in 1828, U. S. senator from N. Y., 1802; thrice mayor of New York; candidate for President, 1812; and chief promoter of the Erie Canal.

Clinton, James, 11, 78.

Clio, 10, 92.

Clive, Catherine.—(1711-1785.) A noted comic actress; for some years in Garrick's company.

Clive, Robert, Baron Clive of Plassey.—(1725-1774.) An English statesman and general. Went out to India on the outbreak of wars between the French and the British in India as a clerk in the East India Company. He is really the man who won for the British their great possessions in India. His conduct of affairs in India was made the subject of parliamentary enquiry, in which he was exonerated.

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Teaching care of, 2, 318.

To iron, 1, 30.

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Chest protection, 6, 15.

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Hygienic, 6, 15.

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Tights for creeping, 2, 84.

Clotho, 10, 103.

Clotilda, wife of Clovis, 10, 405.

Cloud, St. (*san-klo'*).—A town of France, in the department of Seine-et-Oise, situated on

the slope of a hill on the left bank of the river Seine, a couple of miles outside the fortifications of Paris. Its chief attraction was once the splendid chateau or palace-castle, built by Cardinal Mazarin, long the residence of the Dukes of Orleans, rebuilt by Louis XIV., bought by Louis XVI. for Marie Antoinette, and the favorite summer residence of the two Napoleons. It was burned by French artillery fire, in the war with Germany, in 1870, while it was the headquarters of the German staff, and has since been demolished. In St. Cloud, Napoleon I. was here named first consul, and in it Charles X. signed the ordinances of July, 1830. It was the headquarters of the allies in 1814, and also of Blucher in 1815, during the siege of Paris; in it, moreover, the treaty for the capitulation of the capital was signed (1815).

Clouds are masses, more or less dense, of fog, consisting of minute particles of water or watery vapor, floating in the atmosphere, and often in a frozen state, when they descend to the earth as snow or hail. When the air is saturated with vapor, and has its temperature lowered, either by ascending and becoming rarer, or by meeting a colder current, a portion of the vapor loses its gaseous form, and becomes condensed into water, when it is precipitated as rain. Clouds are, according to their external appearance, classified as cirrus, cumulus, stratus, and nimbus or rain clouds. The *cirrus* cloud, familiar as cat's or mare's tail, are usually observed at great heights, possibly frozen, and have the appearance of slender filaments or of long, white, silver horizontal bands. They seem stationary in the sky from their slow movement at a great elevation. The *aurora borealis* is supposed to be connected with cirrus clouds. The *cumulus* is the dense, white, cottony mountainous clouds of the daytime, which at sunset often mass themselves and deepen in color. They are formed from the ascending air which has been heated on the earth's surface. The *stratus* clouds, which form at a lower elevation, are the horizontal bands that form at sunset and disappear in the morning. It includes the white and gray mists formed in valleys and over marshes. The *nimbus* cloud has a uniform gray tint, and is the rain and thunder cloud, which, on the lowering of temperature in the air below the dew point, precipitates rain.

Clouet, Jehannet, 9, 260.

Clough, Arthur Hugh.—(1819-1861.) A noted English author and poet.

Clough, Mary Anne, 14, 340.

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- Clover**, 5, 62.
 Alsike, 5, 63.
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 Red, 5, 63.
Clover, Symbolism, 1, 199.
 White, 5, 63.
 Zigzag, 5, 63.
Cloves, 4, 485.
Clovis I.—(465-511.) Son of Childeric, the Frankish King; himself founder of the Merovingian line of these Kings. Husband of Clotilda.
Clovis, 10, 235, 405.
Clubs, Debating, 1, 56.
 Establishment of Mothers', 2, 381.
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 Practical programmes for Mothers', 2, 383.
 Study for Mothers', 2, 20.
 Walking, 6, 164.
 Within reach of Mothers, Bringing the, 2, 383.
Clumber spaniel dog, 4, 21.
Cluny.—A town of France, noted for its laces, and also for its Benedictine Abbey, founded in the 10th century.
Cluny tapestry, 1, 36.
Clyde.—A noted river of Scotland. Length 96 miles.
Clyde, 14, 261.
Clymer, George, 11, 78.
Clytemnestra.—In Greek mythology, the wife of Agamemnon; said to have slain her husband, through jealousy and fear, and was put to death with her paramour.
Clytie.—In mythology, a nymph who was beloved by Apollo, and changed to a heliotrope.
Clytie, daughter of Oceanus, 1, 199.
Coach-dog, 4, 19.
Coahuila (*kō-ä-wē'lä*).—A state in Mexico south of Texas. Area, 63,569 sq. miles; pop. (1895), 237,815.
Coal, Anthracite, 5, 455.
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 Fire damp, 5, 459.
 Sawing coal, 5, 458.
 Screening the coal, 5, 459.
 Shafts, 5, 457.
 Veins, 5, 457.
Coal-tar products, 5, 243.
Coast and Geodetic Survey.—Established in 1807 by President Jefferson, under an act of Congress, which appropriated \$50,000 for the purpose. It operates all over the U. S., and charts the coasts and inlets for the purpose of lessening the dangers, and suggesting means for promoting the safety and facility of navigation. The scientific and practical work of the bureau was until 1832 conducted irregularly and imperfectly, through lack of necessary financial support, but since that year it has been methodically prosecuted under eminent engineers and has proved of incalculable value.
Coasters' Harbor Island, 12, 342.
Coasting, 6, 301.
 Double-runner, 6, 301.
Coast Range, or Coast Mountains.—A chain of mountains in western Cal., running almost parallel with the Pacific. Its highest peak is San Bernardino, 11,500 ft. high; a continuation of the range appears also in Ore., near the coast. There is also a Coast Range of mountains in southeastern Brazil.
Cobalt.—A steel-gray metal, occurring in its free state in small quantities in Meteoric Iron, in combination with arsenic, as white-tin cobalt, also with sulphur and arsenic, with arsenic and oxygen, and present in many copper ores. It is hard, infusible, and magnetic, and in its chemical properties and compounds resembles iron. Its atomic weight is 59, and the symbol for its atom is *Co*. Cobalt has two oxides, the protoxide and the sesqui-oxide; the latter being used for staining glass and porcelain. Its chief use in the arts is for the preparation of colors; on a large scale it is produced mainly as an accessory in the treatment of nickel ores. It is found in Norway, Sweden, Rhenish Russia, in the Transvaal, Bolivia, and in Missouri, U. S. A.

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Cobalt, 5, 22.

Cobbe, Frances Power.—(1822 —.) An English author of essays on various subjects, and a philanthropist.

Cobbett, William.—(1762-1835.) A noted English political writer, emigrated to America in 1792 and for two years published the "Porcupine's Gazette" at Philadelphia. After his return to England, published "Cobbett's Weekly Political Register," and the "Parliamentary Debates." Elected to Parliament 1832 and in 1834.

Cobbett William, 8, 59.

Cobden, Richard —(1804-1865.) A distinguished English statesman and political economist.

Cobden, Richard, 14, 96.

Coblenz (*kō'-blents*).—The capital of the Rhenish Province in Prussia on the Rhine at the junction of the Moselle. Pop. about 33,000.

Cobra, 4, 248.

Characteristics of, 4, 248.

da Capello, 4, 248.

Habits of the, 4, 248.

Coburg.—(1) A duchy of Germany forming with Gotha the duchy of Saxe-Coburg-Gotha. Pop. (1900), 230,000.

(2) A city in the above duchy, in the valley of the Itz. Pop. (1895), 18,689.

(3) A port on Lake Ontario in Northumberland Co., Ont., 65 miles from Toronto. Pop. of Cobourg, Ont. (1901), 4,239.

Cocaine.—A powerful drug, derived from the leaves of a South American shrub (*Erythroxylon coca*), and used to a large extent as a local anæsthetic. When used internally in moderate doses ($\frac{1}{4}$ of a grain is a dose), it acts as a stimulant to the brain and to the spinal cord. It is of value also in minor surgery and in diseases of the eye and ear. Its use in excess is disastrous, in bringing on convulsions, and often is fatal. The properties and effects of cocaine, or coca, therefore resemble opium, though less narcotic, while it possesses the property, unlike opium, of dilating the pupil of the eye, and of lessening, in the user of it, the desire for ordinary food.

Cocaine, 4, 485; 5, 249.

Coccyges, a class of birds, 4, 103.

Coccyx, 1, 273.

Cochin China.—Almost a synonym for Anam,—a division of Further India,—but more properly the eastern or sea-coast part of Anam.

Cochin fowl, 4, 106.

Cochineal.—A dye-stuff used for the production of carmine, crimson, scarlet, orange, and other tints, introduced first into Europe from

Mexico. It is extracted from a dried insect (females only are used), the *Coccus cacti*, an insect of the order Hemiptera, which feeds upon the nopal plant, a native of Peru and Mexico. Cochineal is collected thrice in the seven months of the season when the insects are gathered; they are then immersed in hot water or killed by exposure to the sun, steam, or heat of an oven. The insect owes its tinctorial power to the presence of a substance termed *cochinealin*, or carminic acid, a compound of hydrogen, carbon, and oxygen, which may be prepared from the aqueous decoction of cochineal.

Cock and his combats, Spanish fable, 3, 206.

Cock-of-the-rock, 4, 212.

Cockatoo, 4, 209.

Black, 4, 209.

Care of the, 1, 141.

Teaching to talk, 1, 141.

Cockburn (*kō'bērn*), Sir **Alexander James Edmond**.—(1802-1880.) Was Lord Chief Justice of England and a noted jurist. He was the representative of England at the Arbitration Conference of the Alabama claims at Geneva.

Cocker spaniel dog, 4, 21.

Cockeran (*kok'ran*), **Henry**.—Wrote the first published dictionary of the English language. Although he lived in the 17th century, nothing is known of his life. The title of his book is "The English Dictionary: or a New Interpreter of Hard English Words."

Cock Lane Ghost.—In London, 1762, an imposture by which knockings and other strange noises were heard, and a "luminous" lady was supposed to be seen—the reputed ghost of a Mrs. Kent.

Cockran, William Bourke, 12, 239.

Cocoa, Cacao, or Coco.—A valuable dietary substance produced from the seeds of a tropical tree, and used as a breakfast beverage as cocoa and chocolate. The fruit of the tree contains the seeds which constitute the raw cocoa or cocoa bean of commerce. The tree is native to Mexico, to many of the South American countries, and to most of the West India islands. As prepared for a beverage, the seeds or nibs are roasted, whereby the fine aromatic substance is formed, and the starch particles are changed into dextrin. It forms a nutritious drink, owing to the soft, solid oil known as cocoa butter, which forms more than 50 per cent. of the shelled bean. The rest consists of starch, gluten, albumen, and the principle, called *Theobromine*, analogous to caffeine.

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Cocoanut palm, 4, 486.
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 Standing among the food fisheries, 4, 285.
Codrington, Admiral, 10, 363.
Cody, William Frederick, 12, 239.
Coeducation, Effects of, 2, 424.
Cœur de Lion.—A name given to Richard I. of England, and to Louis VIII. of France, because of their great courage and bravery.
Coffee, 5, 56.
 To detect chickory in, 5, 55.
Cofra, 4, 486.
Cognac (*kōn-yak'*).—A town on the Charente near Angoulême in France. It is the center of the trade in brandy of that region.
Cogswell, Joseph Green, 11, 361; 8, 281.
Cohesion, Force of, 5, 256.
Cohoes.—A city in Albany Co., N. Y., with large rolling-mills and manufactures of hosiery and underwear. It derives its water-power from the Cohoes Falls, 70 feet in height. Pop. (1900), 23,910.
Coimbra, University of, 10, 286.
Coinage laws, 13, 159.
Coins, Metric system taught by, 13, 160.
 Value of foreign, 13, 154.
Coke, 5, 180, 455.
Coke, Sir Edward.—(1552-1634.) An eminent English legal authority and jurist. He was the author of many legal treatises.
Colbert, 10, 316.
Colby, John, 14, 28.
Colchester.—A town in England, in Essex, on the river Colne. It is of Roman antiquity, remains of the Roman foundation and occupation being yet quite plain. The Castle is one of the strongest of the Norman fortifications in England. Population about 35,000.
Colchicum, 5, 57.
Cold, Extremes of.—The lowest natural temperature recorded was that related to be taken, in 55° N. lat., by Hansteen, the Norwegian astronomer and physicist, who died at Christiania in 1873. This was 68' 3° c. below zero.

Doubtless lower temperatures occur in still more northerly regions were they attainable by man and could be endured by the physical frame. At the temperature observed and noted by Hansteen, mercury freezes, and the spirit-of-wine thermometer is hardly to be trusted. Artificially a still lower temperature has been obtained, though not recorded, when hydrogen was solidified by its own expansion. To measure such a temperature is, however, hopeless. The highest terrestrial temperature known, so far, is that of the electric light, which the French physicist, Becquerel, estimates at 2070° c. Still higher is that of the sun, which probably, however, is lower than that of some of the brighter stars. The U. S. Weather Bureau, at Washington, has done good work for years in recording, as well as forecasting, low temperatures, cold waves, and winter storms, in the northern and western parts of the Continent, where deaths from cold and exposure are not uncommon. In the Mackenzie River and Yukon districts of Canada, and in Alaska, north of Nome City and close to the Arctic Circle, the climate is severe, the winter lasting for eight months, when the mean temperature during the coldest month would be as low as 40° below zero. In the Yukon Valley, some years ago, it is said, that a degree of cold so low as 77° below zero was recorded.
Cold Harbor (Va.), Battle of, 11, 474.
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Coldstream Guards.—A regiment of British footguards, enrolled at Coldstream, a small town in Berwickshire, Scotland, by General Monk in 1660.
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Cole, Timothy.—Born at London, 1852. A leading American wood-engraver.
Coleman, Lindsay, 13, 74.
Colenso, John William.—(1814-1883.) A noted English divine. He was appointed bishop of Natal, 1853. Author of a number of works, mostly educational and religious.
Coleoptera, 4, 348.
Coleridge, Samuel Taylor.—(1772-1834.) A celebrated English poet and literary critic.
Coleridge, Samuel Taylor, as a conversationalist, 1, 80.
 on relation of sex, 2, 392.
 Style of, 8, 384.
Colfax, Schuyler, 12, 239.
Colic, Treatment of, 1, 328.
Coligny, Gaspard de (*ko-lēn-yē*).—(1517-1572.) A Huguenot leader and French general, led the Huguenot forces in the civil wars of 1562. He was the first victim of the massacre of St. Bartholomew.

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Coligny, Admiral, 10, 295
Colins, Alexander.—(1526-1612.) A noted Flemish sculptor and worker in wood and in ivory.
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COLLEGES.—

(Lat., *collegium*, a corporation or fraternity.) A term commonly used as synonymous with universities, though in England, especially, there is a notable difference. Broadly interpreted, they are institutions of learning, generally endowed with revenues, and governed by a corporate body of professors under a president or chancellor. The English idea of a college is that of a corporation independent of the university, whose function in relation to the college or colleges is that of an examining and degree-conferring body. In the case of the famous English colleges of Oxford and Cambridge (of which Oxford has 23, and Cambridge has 18), the college, under the university, is an academic institution, having usually its own revenues, with a governing and teaching body of its own, and whose teachers and students live in residence together in particular buildings in a partly monastic way. Elsewhere as we have said, the college is more nearly synonymous with the university, and where they separately exist, as in Scotland, the two are united under the same government to form the university. Colleges, for academic purposes, came first to be founded in Europe about the close of the 12th and the beginning of the 13th centuries. In the United States, where our colleges were at first founded on the English model, the earliest institution was Harvard, opened in 1638 at Cambridge, Mass., followed by William and Mary College, at Williamsburg, Va., in 1693, and by Yale, at New Haven, Conn., in 1701. Washington and Lee Univ., Lexington, Va., dates from 1749, and Hampden-Sidney College, Va., from 1776.

Princeton Univ. was founded in 1746, Rutgers College, New Brunswick, N. J., in 1766, Dartmouth College, Hanover, N. H., in 1769, Columbia Univ., New York in 1754, the Univ. of Pennsylvania, Philadelphia, in 1740. Brown Univ., Providence, R. I., in 1764, and Georgetown (R. C.) Univ., Washington, D. C., in 1791. The other institutions for higher learning in the United States that date from the 18th century are St. John's Coll., Annapolis, Md., which had its foundation in 1789, Washington Coll., Chestertown, Md., (1783), Williams Coll., Williamstown, Mass., (1793), Univ. of N. Carolina, Chapel Hill, N. C., (1795), Univ. of Nashville, Nashville, Tenn., (1785), Dickinson Coll., Carlisle, Pa., (1783), Greenville (Presb.) Coll., Tusculum, Tenn., (1794) and Washington (Presb.) Coll., Tenn., (1795). The other large and successful eastern colleges, and all of the western and southern institutions are of later date, such as Johns Hopkins Univ., Baltimore, Md., (1876), Amherst Coll., (1821), Cornell Univ., Ithaca, N. Y., (1868). Univ. of Rochester, N. Y., (1850), Coll. of the City of New York (1849), Western Univ. of Penn., Pittsburg, Pa. (1819), Lafayette (Presb.) Coll., Easton, Pa. (1832), Lehigh Univ., So. Bethlehem, Pa. (1866). Univ. of Virginia, Charlottesville, Va. (1825), Bowdoin Coll., Brunswick, Me. (1802), Univ. of Maine, Orono, Me. (1868), Boston Univ. (1872), Columbian Univ., Washington, D. C. (1821), Univ. of California, Berkeley, Cal. (1869), Leland Stanford Jr. Univ. Cal. (1891), Univ. of Colorado, Boulder, Col. (1877), Univ. of Georgia, Athens, Ga. (1801), Indiana State Univ., Bloomington, Ind. (1820), Univ. of Illinois, Urbana, Ill. (1868), Univ. of Chicago (Bapt.) Chicago (1892). Northwestern Univ., Evanston, Ill. (1855), Lake Forest (Presb.) Univ., Ill. (1876), State Univ. of Iowa, Iowa City (1855), Univ. of Kansas, Lawrence, Kan. (1866), Berea Coll., Berea, Ky. (1853), Tulane Univ., New Orleans, La. (1834), Univ. of Mich., Ann Arbor, Mich. (1837), Univ. of Minnesota, Minneapolis, Minn. (1868), Washington Univ., St. Louis, Mo. (1859), Univ. of Nebraska, Lincoln, Neb. (1871), Syracuse Univ., Syracuse, N. Y. (1871), Oberlin Coll., Oberlin, O. (1833), Univ. of Cincinnati, Cincinnati, O. (1874), Univ. of Texas, Austin, Tex. (1883), Univ. of Vermont, Burlington, Vt. (1800), Univ. of Wisconsin, Madison, Wis. (1849), Univ. of Arkansas, Fayetteville, Ark. (1872), State Univ. of Missouri, Columbia, Mo. (1850), New York Univ., N. Y. City (1831), Western Reserve Univ., Cleveland, O. (1826), Ohio Univ., Athens, O. (1809), Ohio State Univ., Columbus, O. (1870), Univ. of Wooster,

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O. (1870), Pennsylvania State Coll., Pa. (1859), Southwestern Univ., Georgetown, Texas, (1873), Vanderbilt Univ., Nashville, Tenn. (1875), Univ. of Utah, Salt Lake City (1850), and West Va. State Univ., Morgantown, W. Va. (1868). Many of these universities and colleges are well-endowed, having been the recipients of handsome bequests or gifts from wealthy philanthropists, such as Mr. John D. Rockefeller, the founder of the Univ. of Chicago, who has contributed to its establishment and endowment an aggregate of \$10,000,000, besides his princely gifts to other institutions. Other noted benefactors of our universities are Dorman B. Eaton, Wm. E. Dodge, Marshall Field, Leland Stanford, Jr., Johns Hopkins, W. D. Sloane, Ezra Cornell, and Andrew Carnegie, besides many benefactors among women who like Mrs. Phœbe A. Hearst, have substantially aided some universities and many colleges for women in the United States.

HARVARD UNIVERSITY.—The oldest and now one of the best equipped institutions for higher education in the United States, is located at Cambridge, Mass., where it was founded in 1636. It is nonsectarian and in the summer schools only is coeducational. It includes Harvard College, the Graduate School, Lawrence Scientific School, Schools of Law, Medicine, Dentistry, Divinity, Agriculture, and Veterinary Medicine, together with Harvard annex for the instruction of women, the Summer Schools, and Bussey Institute. Besides the library, which has a collection of nearly 600,000 volumes and over 400,000 pamphlets, there are Museums of Comparative Zoölogy, known as the Agassiz and the Peabody Museums, and a fine Memorial Hall, built in honor of the alumni who fell in the Civil War. The president is Charles Wm. Eliot, LL. D.; the teaching staff, including instructors, number about 500, while there is a student attendance of 3,912, or including that of the summer schools close upon 5,000. The value of the assets of the corporation is in the neighborhood of \$10,000,000, and the annual estimated revenue is now nearly one and a half million dollars. Since its foundation Harvard has conferred over 21,000 degrees upon graduates.

YALE UNIVERSITY, New Haven, Conn., is the third institution of higher learning, in point of origin, in the United States, and ranking with Harvard among the great universities of the New World. In Oct., 1901, it celebrated with much éclat the two hundredth anniversary of the granting of its char-

ter, procured for it through the instrumentality of its early benefactor, Elihu Yale, after whom, in 1745, the institution received its name of Yale College, subsequently changed (in 1887) to Yale University. Since its foundation, Yale has had 13 presidents, its latest head being Arthur T. Hadley, LL. D., formerly professor of Political Science in Yale, who succeeded President Timothy Dwight in 1899. The university has a total teaching staff of 250 professors and lecturers, and a body of attending students of 2,500. It has over \$4,000,000 of productive funds, and has had lately many large gifts and bequests in aid of its several departments, which include law, theology, medicine, philosophy, and the arts, music and the fine arts, science (taught in the Sheffield Scientific School), etc. It has several special libraries, comprising about 260,000 volumes, the Peabody Museum of Natural History, and an observatory, each separately endowed, as well as many special lectureships and administration and residential buildings. It has also a School of Forestry and art galleries for the instruction of students of both sexes in the Fine Arts.

PRINCETON UNIVERSITY, long known as the College of New Jersey, and founded in 1746, was first opened at Elizabethtown and afterwards removed to Newark, and finally to Princeton, N. J. Here, in 1754–55, was erected for its use, Nassau Hall, the first of its buildings to be utilized as a college, and subsequently as a university. It was long supported by the Presbyterian body, and under the brilliant presidency of the late Dr. McCosh it made great strides, especially in the departments of philosophy, language and literature, and mathematics and science. In 1896, Princeton celebrated its sesquicentennial, the 150th anniversary of its foundation. The college has a large scientific department, known as the J.C. Green School of Science, founded in 1873, and offers instruction in it in electrical and civil engineering, as well as in general science. The university has an endowment now exceeding \$2,500,000, with a faculty numbering about 100, and a student body close upon 1,300 in number. It has, moreover, endowed scholarships (106 in number) for the benefit of students in the academic department. Among its recent buildings are a number of new dormitories, Blair Hall and the Stafford Little Hall among them, together with an infirmary, a good library, laboratory, museum, and other equipments necessary to the status of a university. Its present president is Francis L. Patton, D.D.LL.D.

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COLUMBIA UNIVERSITY, situated in New York City, was founded in 1754 as King's College, and received its charter from George II. The institution has had a long and prosperous career, and is an amply equipped and now a richly endowed university, the value of its new grounds and buildings (now located in a tract of 18 acres between 116th and 120th Street, New York) being close upon \$9,000,000, with productive funds of about a like amount. Besides its regular collegiate course, the university gives instruction in the various departments of law, medicine, philosophy, political science, pure science, including a school of mining. In 1900, Barnard College for Women became affiliated with it. From the organization of Columbia, nearly 16,000 have been graduated from it. Its late head was the Hon. Seth Low, LL.D., who in 1901 resigned to become mayor of New York City. It has a faculty over 350 in number, including lecturers and tutors, with a student attendance of about 4,250. The library comprises 300,000 volumes. Besides the student body above mentioned, 750 receive instruction during the year through the Teachers' College Extension courses. Columbia has of late received many large bequests, including large benefactions, among others from J. D. Rockefeller, Dorman B. Eaton, Mr. and Mrs. W. D. Sloane, and from several anonymous givers.

BROWN UNIVERSITY.—Founded in 1764 as "Rhode Island College," and for a time under the control of the Baptist denomination. It is now undenominational. In 1770, it was removed from Warren, R. I., to Providence, R. I., its present location, and its name was changed to Brown University in honor of Nicholas Brown, a philanthropic merchant-graduate, who gave about \$100,000 to its endowment. Its head is W. H. P. Faunce, D. D., and its faculty numbers 77 professors and lecturers, with a student attendance numbering nearly 800, including 150 in the women's college. Its graduates number over 4,500. The value of its grounds and buildings is close upon \$1,180,000, while it has about \$850,000 of productive funds. The library comprises 100,000 volumes. The increase of the endowment fund of the university has of recent years been highly gratifying, Mr. J. D. Rockefeller being a large contributor. Gifts have also of late been received, in the form of a dormitory for the women's college, while Maxcy Hall, destroyed by fire, has been rebuilt, and a new library building is in contemplation. Lyon Hall is now also being repaired

after a destructive fire in it. An observatory, equipped with a powerful telescope, is also among the modern equipments of the institution.

JOHNS HOPKINS UNIVERSITY, Baltimore, Md., was founded in 1866 by the munificence of a citizen of the Maryland capital, whose name it bears. It was organized for work in 1876, and has had a successful career under its president (now resigned) Daniel C. Gilman, LL. D. A new site for the institution has been recently offered, conditional on the securing of an endowment fund of a million dollars, which has already been made up by its friends and graduates. The teaching staff numbers 132, including nearly 50 professors and lecturers in Johns Hopkins Medical School. During the twenty-five years of its existence, the university has had close upon 4,000 students, of whom about 2,900 have followed graduate studies. Since 1878, when degrees were first conferred by the institution, nearly 700 have received the B. A. degree, 140 the M. D. degree, and 575 the Ph. D. degree. The library has nearly 100,000 volumes and as many pamphlets. Under the auspices of the university, the following publications are issued: the American Journal of Philology, journals of Chemistry, Mathematics, Experimental Medicine, Terrestrial Magnetism, together with Modern Language Notes, Studies in Historical and Political Science, Biological Memoirs, and contributions to Assyriology. The value of the present grounds and buildings of the university is estimated at \$750,000, while it has \$3,500,000 of productive funds for its income and expenditures. The number of its students in attendance is 650.

UNIVERSITY OF CHICAGO.—Founded by the munificence of Mr. John D. Rockefeller, in Chicago, Ill., and incorporated in 1890. The university began work in 1892, the buildings occupying a tract of land fronting on Midway Plaisance, between Washington and Jackson parks. Besides the academic and graduate work department, there are schools of law, medicine, divinity, education, technology, engineering, fine arts, and music. It encourages also university extension course work, and for this it has the equipment of an ample library, with 320,000 volumes, extensive laboratories and museums, with the adjuncts of a university press and allied affiliations. Besides the president, W. R. Harper, LL. D., professor of Semitic languages and literature, there is a faculty numbering about 300, including instructors, and a student attendance of 3,520. The total endowment of the university now

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exceeds \$10,000,000, and its annual income is close upon \$800,000. Large additions to the university buildings are now contemplated, including a new dormitory, university commons, café, and club houses, and a printing press building, etc.

PENNSYLVANIA, UNIVERSITY OF.—This institution, located at Philadelphia, and chartered so recently as 1875, ranks among the older and well-equipped American universities. It is nonsectarian and coeducational in its graduate department, and is especially strong in law, medicine, and science. The property of the university, including real estate, buildings, library, etc., was in 1900 valued at close upon eight million dollars. It has lately completed a new museum of science and art, a memorial tower and gateway, new dormitories, and it has in contemplation the erection of a university chapel and a new spacious dining hall, with a final accommodation in dormitories for 1,000 students. It has lately received gifts also, to the value of \$250,000, for the erection of a new physical laboratory. Its teaching force, under Provost C. C. Harrison, LL. D., is 260 in number, and its student attendance is close upon 2,755, enrolled as follows: In the college proper (academic course) 970, department of law, 315; philosophy, 175, medicine, 690; dentistry, 490; veterinary medicine, 50; laboratory of hygiene, 20. The library comprises 200,000 volumes, and about 50,000 pamphlets. It has a rich and interesting ethnological collection, and has given much practical aid in the work of Biblical archæology. The Wm. Pepper Hall and the Town Scientific school are among the useful equipments of the University.

ILLINOIS, STATE UNIVERSITY OF, Urbana, Ill., opened in 1868, has a faculty of about 200 professors and instructors, under its president, Andrew Sloan Draper, LL. D. It is coeducational, but nonsectarian, and has, besides its preparatory and academic courses, departments in agriculture, in law, medicine, and pharmacy. In 1900, the number of students in attendance in all departments, was over 2,000. It has also schools of engineering, science, library science, and music. The university assets are estimated at \$1,600,000, with a yearly income of about \$500,000. Part of this income is derived from a 5 per cent. interest, paid by the State, on a land grant by the national government of 480,000 acres to the university. The university library contains 45,000 volumes and about 4,000 pamphlets, and the libraries of the State Laboratory of Natural History and of

the Agricultural Experiment Station contain in addition, about 10,000 volumes and 17,500 pamphlets. The institution was in 1867 incorporated as the Illinois Industrial University and opened in the following year: in 1885 the Legislature of the State changed its name to the present one — University of Illinois.

MICHIGAN, UNIVERSITY OF, Ann Arbor, Mich., was founded in 1837, and opened in 1841. It is one of the most successful, as well as one of the earliest, of the State institutions for higher education in the west. It has an annual income of about \$560,000, the State legislature having recently raised the appropriation for its aid from the tax of one-sixth of a mill to that of one-fourth. Its law department has lately been supplied with new buildings, with commodious lecture rooms and a library. It has a Homeopathic medical college, with hospital attached, and a large Dental department; and has had just completed, for the use of women, the Barbour Gymnasium. The campus covers 40 acres, on part of which it is designed to erect a new science building, and one for the use of engineering students. Besides the academic course, and courses in law, medicine, surgery, dentistry, pharmacy, homeopathic medicine, and engineering, it supplies instruction in marine architecture, in the designing of vessels for service on the Great Lakes. The library comprises close upon 150,000 volumes. It has a teaching staff, including professors and instructors, of 160, under the president, Jas. B. Angell, LL. D., with a student attendance, including those of the summer session, of 3,300.

WISCONSIN, UNIVERSITY OF.—Situated at Madison, Wis., a nonsectarian and coeducational institution, was organized in 1848 and reorganized in 1866. Besides the college of arts and science, it has a department of university extension, a summer school, and faculties in music, law, agriculture, mechanics, engineering, and pharmacy. It has an income of about \$550,000 per annum, derived from three sources — a state tax, federal grants, and private gifts or bequests. The grounds of the university comprise 300 acres, on which are erected thirteen buildings. It has a faculty of 151 professors and lecturers, under its president, Chas. Kendall Adams, LL. D., and a student attendance of over 2,400, distributed as follows: College of letters and science, 1,096; agriculture, 382; mechanics and engineering, 327; law, 231; pharmacy, 32; and music 193, besides a considerable attendance in the summer school. The library comprises 56,000 volumes, housed in a spacious and com-

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modious building. The corporation of the University contemplate at an early day to ally with it a medical school or college, to be situated at Milwaukee, and to found a department of forestry, an art greatly needing instruction in a state like Wisconsin.

AMHERST COLLEGE, Amherst, Mass.—An institution of the Congregational denomination, founded in 1821. It has a faculty of 35 professors, under its president, George Harris, D. D., and a student body of 400. The value of its grounds and buildings is in the neighborhood of \$850,000, while it has productive funds for its annual expenditure of close upon one and a half million dollars. The library contains about 75,000 volumes. Besides the library, the college has an art gallery, a museum of Indian relics, Biblical antiquities, and minerals, an observatory, memorial chapel, gymnasium, and a park and playground of nearly thirty acres.

ARMOUR INSTITUTE OF TECHNOLOGY, Chicago, Ill., founded by the beneficence of Philip D. Armour in 1893, and of which the Rev. D. F. W. Gunsaulus was for some years its president. Its teaching body, professors and instructors, number 70, and its attending students are close upon 1,200. The value of its grounds and buildings are estimated at \$2,000,000, and it is equipped with a good library of nearly 16,000 volumes. Connected with the enterprise and aided financially by the late Mr. P. D. Armour was a city mission, and a group of apartment buildings, rented at a moderate sum to workingmen and their families, and known in Chicago as "the Armour flats."

BOWDOIN COLLEGE, Brunswick, Me., under the presidency of Rev. De Witt Hyde, D. D., was founded in 1794 and opened in 1802. Besides its arts department, it has a medical school in affiliation with the College, and on its rolls numbers among its graduates, Longfellow, Hawthorne, Chief-Justice M. W. Fuller, and ex-speaker T. B. Reed. It has a faculty of 36 professors and a student attendance of nearly 400. The library contains about 70,000 volumes, and the College is equipped also with an art gallery and with chemical and philosophical apparatus. The value of its grounds and buildings is \$500,000, and it has productive funds amounting to nearly \$650,000.

BOSTON UNIVERSITY, Boston, Mass., received its charter from the State in 1869 and was opened in 1872. It is under the con-

trol of the Methodist Episcopal denomination, its president being the Rev. W. F. Warren, LL. D., S. T. D. It has the reputation of doing good work in its graduate and professional departments, under its professors and instructors, who number in all about 190. Its student attendance averages 1,450. The Mass. Agricultural College at Amherst is affiliated with the institution. The university owns a good library, of about 25,000 volumes, and possesses productive funds of the value of one million dollars. The value of its grounds and buildings is \$850,000.

CALIFORNIA, UNIVERSITY OF.—Situating at Berkeley, Cal., was established in 1868 by act of the state legislature, and is supported by an appropriation in the form of a state tax. Part of the machinery of the University, in addition to its graduate department, colleges of letters, commerce, science (social, natural, and applied) is an agricultural college, which receives aid from the Federal Government. It has also departments of mechanics, mining, civil engineering, chemistry, an institute of art (Mark Hopkins), a college of law (the Hastings), one of pharmacy, a veterinary department, a dental department, and a post-graduate medical department. Of recent years the University has received large benefactions, especially in the gifts of Mrs. Phoebe A. Hearst, who designs to erect new buildings for the University at a reported cost of \$8,000,000. The present income of the institution for educational purposes is about \$350,000, and it has productive funds amounting to nearly \$3,000,000. The faculty, under its president, Benjamin Ide Wheeler, Ph. D., numbers 380, with a student attendance of about 2,600, a considerable proportion of which are women. The University has a valuable aid in Lick Observatory, and a useful library consisting of about 85,000 volumes.

IOWA, UNIVERSITY OF THE STATE OF.—Located in Iowa City, Ia., was organized in 1847, and is supported in part by legislative appropriations, and in part by the fund derived from the sale of the Congressional land grants. In 1900, it had a faculty of over 100 professors and instructors, under the president G. E. McLean, LL. D., with a student attendance of 1,450. The University was reorganized on its present basis in 1860, and is coeducational, but undenominational. Besides its collegiate, undergraduate department, it has professional branches in law, medicine, homeopathy, dentistry, and pharmacy. It has a

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separate geological department, enriched in its museum by specimens from the state geological surveys, and it has a well-developed system of university-extension lectures. Its library comprises 26,000 volumes, and the institution enjoys an income of \$270,000 a year. The amount of its productive funds reaches \$250,000.

CINCINNATI, UNIVERSITY OF, Cincinnati, Ohio, was founded in 1874, and has a faculty of 100 professors and instructors under its acting president, Dean E. W. Hyde, with a student attendance of nearly 800. It has the advantage of being located in a city noted for its art and musical tastes, as well as those drawn to education and literature. It has a library containing about 18,000 volumes, while the institution has productive funds available for its maintenance to the value of one and a half million dollars. The value of its grounds and buildings is estimated at \$260,000.

CLARK UNIVERSITY, Worcester, Mass., was opened in 1889, and is undenominational. Its founder was Jonas Gilman Clark, a resident of Worcester, who endowed the institution with two million dollars, and since his death, in 1900, it received his valuable library, in addition to its own collection of 18,000 volumes. It has a small faculty and small student attendance, though what it has so far accomplished, under its able president, G. Stanley Hall, LL.D., is in the nature of advanced work, research, etc., particularly in the branches of psychology and biology. In connection with the university, there is held a summer school annually, and special Saturday courses for teachers are given during the academic year.

COLGATE UNIVERSITY, located at Hamilton, N. Y., was originally known as Madison University, but began its career in 1846 under its present title, assumed in honor of its large benefactor, James B. Colgate, who endowed it with sums aggregating about \$2,000,000. It is under Baptist control, its president being George E. Merrill, D. D. It has a faculty of 36 instructors, and a student attendance of about 350. The library comprises about 30,000 volumes. The value of its grounds and buildings is estimated at \$650,000. Its graduates number about 2,000.

COLORADO, UNIVERSITY OF.—A state institution supported by state taxes, opened in 1877 at Boulder, Col. 28 miles N. W. of Denver. It is used by both sexes, and to its general academic branches, in the liberal arts,

law, medicine, music, dental surgery, and applied science, it provides instruction in post-graduate courses. Its faculty numbers 86 professors and instructors, under a president, Jas. H. Baker, LL. D., and its student attendance is about 700. It has a library of 18,500 volumes. The value of its grounds and buildings is close upon \$200,000.

DARTMOUTH COLLEGE.—Situated at Hanover, N. H., was founded in 1769, and is under the control of the Congregational body, though unsectarian in its teaching. The institution has had a long history, from before revolutionary times, and to-day it maintains a high character among New England seats of learning. It has a faculty of fifty instructors under its president, W. J. Tucker, D. D., LL. D., and a student attendance of about 650. Its grounds and buildings are prettily situated on the banks of the Connecticut River, and are valued at half a million. It has productive funds of the value of one and a half million. The library contains about 80,000 volumes. Associated with Dartmouth are the New Hampshire Medical School, College of Agriculture and Mechanic Arts, the Chandler Scientific School, and the Thayer Engineering School.

MINNESOTA, UNIVERSITY OF.—Situated at Minneapolis, Minn., is a state institution, first organized in 1851, but properly had its active founding when it was reorganized in 1868. It is coeducational, but undenominational. Its president is Cyrus Northrup, LL.D., and under him there is a faculty of about 200 professors and instructors, with a student attendance of nearly 3,000. The value of its grounds and buildings is estimated at \$1,700,000, while it has productive funds approximating one and a half million. The library contains about 60,000 volumes. Besides its graduate department, the university has a department of medicine, colleges of law, science, agriculture, engineering, and the mechanic arts, and one of literature and the arts. It maintains an experiment station, and geological and natural history surveys.

MISSOURI, UNIVERSITY OF THE STATE OF, Columbia, Mo., was founded in 1842, and has a faculty, under its president, R. H. Jesse, LL. D., of 65 professors, and a student attendance averaging about 1,000. Its buildings and grounds are valued at close upon a million, and it has productive funds estimated at \$1,300,000. The library embraces 30,000 volumes. Besides its graduate and normal school departments, it has a college of agriculture, of engineering, of law and medicine, and a school

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of mines and metallurgy, the latter located at Rolla, Mo.

MISSISSIPPI, UNIVERSITY OF.—Located at University, Miss., was founded in 1848, and is coeducational. It has a faculty of 24 teachers, under its chancellor, R. B. Fulton, and a student attendance of 300. The value of the grounds and buildings (of which latter there are twelve) is estimated at \$225,000, and the institution has productive funds of the value of \$550,000. The instruction is open to both sexes, three chief courses of study being open to them, viz., those in arts, science, and philosophy. There is a library, with 17,000 volumes. Its endowment is chiefly derived from the sale of township lands given to the state by congress for the purposes of higher education.

NEBRASKA, UNIVERSITY OF.—Situated at Lincoln, the capital of the state, was founded by act of legislature in 1869, and is supported chiefly by a state tax and the income derived from land sales and leases, the gifts of the federal government. It is coeducational, and has a faculty of 115, under its acting-president, Prof. C. E. Bessey, and a student attendance of nearly 1,500. It has a library comprising 45,000 volumes, and productive funds of the value of \$175,000. The value of its grounds and buildings is estimated at \$750,000. Besides the graduate school and a college of literature, science, and art, it has schools of music, of the fine arts, an industrial college, and one of law.

NORTHWESTERN UNIVERSITY.—Situated at Evanston, Ill., is an institution under the control of the Methodist Episcopal body, organized in 1855 for the higher education of both sexes. The university has an endowment of \$3,000,000, with an annual income, exclusive of benefactions, of \$400,000. The value of buildings and grounds, which are situated within twelve miles north of the center of Chicago, exceeds \$2,000,000. The following are its departments, each having a distinct faculty of instruction (in all 230 in number): a college of liberal arts, schools of law, medicine, pharmacy, and dentistry, besides a woman's medical school and school of music. The Garrett Biblical Institute, adjoining, serves as a theological school to the university. Its president is H. W. Rogers, LL. D., and the student attendance in the degree-conferring departments numbers 2,250. The library contains 46,000 volumes and over 30,000 pamphlets.

UNIVERSITY OF THE SOUTH.—Located at Sewanee, Tenn., was organized in 1868, and is under the control of the Protestant Episcopal Church in the South. Besides its undergraduate department, it has five professional schools, viz., those in law, theology, medicine, homeopathy, dentistry, and pharmacy. Its faculty numbers 55 professors, under Vice-Chan. B. L. Wiggins, M. A., and a student attendance of 420. The library contains 41,000 volumes. Its grounds and buildings are valued at \$450,000, and it has productive funds estimated at \$175,000. The university was founded by Leonidas Polk, bishop and Confederate general, who was killed in 1864 at Pine Mountain, Georgia.

VERMONT, UNIVERSITY OF, Burlington, Vt., was founded in 1800, and is a coeducational but undenominational institution. It has a faculty of 60 instructors, under its president, M. H. Buckham, D. D., with a student attendance of 600. In 1865, the State Agricultural College was incorporated with the University, and its teaching courses embrace arts, medicine, chemistry, agriculture, and civil, electric, and mechanical engineering. The buildings, which overlook Lake Champlain, are with their grounds valued at over six thousand dollars, while the institution has productive funds estimated at about \$400,000. The Billings Library has about 55,000 volumes. There are over 30 scholarships in the academic department.

VANDERBILT UNIVERSITY.—Situated at Nashville, Tenn., was founded in 1872 as an institution for higher learning by the Methodist Episcopal body of the South. It has received benefactions from the Vanderbilt family to the extent of \$1,500,000. It is coeducational, and offers courses, besides the regular academic one, in law, medicine, theology, pharmacy, dentistry, and engineering. Its faculty numbers about 90 professors and lecturers, under a chancellor, J. H. Kirkland, LL. D., with a student attendance of 800. The value of its buildings and grounds is estimated at \$600,000, and its available productive funds amount to \$1,250,000. The library comprises about 16,500 volumes.

ALABAMA, UNIVERSITY OF, Tuscaloosa, Ala., was founded in 1831. It is coeducational, but undenominational, has a faculty of 32 professors and instructors, under its president, Jas. K. Powers, LL.D., with a student attendance of 325. The value of its grounds and buildings is estimated at \$300,000, while it has a like amount of productive funds. The library comprises 16,000 volumes.

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Colleges.—*Continued.*

BELOIT COLLEGE, Beloit, Wis., is a coeducational institution under the control of the Congregational body, and was founded in 1847. It has a faculty of 25 instructors, under President E. D. Eaton, D. D., and a student attendance of over 400. Its buildings and grounds are valued at \$350,000, and it has productive funds estimated at \$425,000. Its library contains 26,000 volumes.

BRYN MAWR COLLEGE, Bryn Mawr, Pa., is a college for women only, organized in 1885. It has a high standing among institutions of the kind, with a student attendance of close upon 380. The faculty number 42 instructors, under President M. Carey Thomas, Ph. D. The value of its buildings and grounds exceeds \$800,000, while it has over a million of productive funds. The library contains 34,000 volumes and 8,000 pamphlets. Besides its academic course leading to the B. A. degree, there is an excellent graduate department which confers the degrees of M. A. and Ph. D.

CASE SCHOOL OF APPLIED SCIENCE, Cleveland, Ohio, was founded in 1880 to give instruction to men only in the practical departments of architecture and civil, electrical, mechanical, mining, and sanitary engineering. It has a faculty of 21 instructors and a student attendance of 250, under its president, Cady Staley, Ph. D., LL. D. It has a small but useful library, of about 2,500 volumes. The value of its grounds and buildings is \$500,000, and it has productive funds of over two million dollars.

CENTRAL UNIVERSITY, Richmond, Ky., is an institution under the control of the Presbyterian body, founded in 1873. It has a faculty of 50 instructors and a student attendance of close upon a thousand. Its head is L. H. Blanton, D. D. The value of its buildings and grounds is \$160,000, and it has a like amount in productive funds. The library contains about 10,000 volumes.

COLORADO COLLEGE, Colorado Springs, Col., is a coeducational but undenominational institution, founded in 1874. It has thirty-six instructors and a student attendance of 260, under President W. F. Slocum, LL. D. The value of its buildings and grounds is estimated at \$450,000, and it has productive funds to the extent of \$375,000, with a library comprising 23,000 vols.

CORNELL UNIVERSITY.—Situated on Cayuga Lake, Ithaca, N. Y., and named after Ezra Cornell, a wealthy resident of Ithaca, who, in 1865, gave to the institution \$500,000,

subsequently considerably augmented. The University was opened in 1868, and has enjoyed an ample endowment, from the source above indicated, as well as from the income from nearly a million acres of land appropriated to it by Congress. In addition to its academic department, Cornell has colleges of law, medicine, veterinary medicine, agriculture, forestry, architecture, and civil and mechanical engineering. Its teaching staff numbers 315, with a student attendance of 2,140. Its president is J. G. Schurman, LL. D.

COLUMBIAN UNIVERSITY, Washington, D. C., is an institution founded in 1821 for both sexes, under the control of the Baptist denomination. The President is B. L. Whitman, D. D., who has under him a teaching faculty 162 in number, and a student body of over one thousand. Its grounds and buildings are valued at a million, and it has productive funds to the extent of \$260,000, with a library of about 13,000 volumes.

DENVER UNIVERSITY, Denver Col., is a coeducational institution under the control of the Methodist Episcopal body, and was founded in 1864. Its President is H. A. Buchtel, D. D., who has under him a teaching body of 90 professors and instructors, with a student attendance of 420. The value of its buildings and grounds is estimated at \$650,000, and it possesses productive funds to the extent of \$175,000, with a library containing about 10,000 volumes.

DE PAUW UNIVERSITY, Greencastle, Ind., is coeducational and is controlled by the Methodist Episcopal body. It was organized in 1837 as the Indiana Asbury University, but its name was subsequently changed when it received the large benefactions of Mr. De Pauw. It has besides the regular school of liberal arts two professional schools of law and theology. It also encourages post-graduate work. It has 35 instructors and nearly 800 students, under President H. A. Gobin, D. D. It has productive funds of the value of \$200,000, besides grounds and buildings valued at \$300,000.

HOWARD UNIVERSITY, Washington, D. C., established in 1867 with the object of giving emancipated slaves and colored youth of both sexes the advantage of a liberal and professional education. The tuition is free, according to the purpose of its founder, Gen. Oliver Otis Howard, at the time at the head of the Freedman's Bureau. It has 75 instructors and a student body of over 600, under its president, J. E. Rankine, D. D. The value of its grounds

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and buildings is \$600,000, and it has nearly \$200,000 of productive funds, with a library containing 14,000 volumes.

INDIANA UNIVERSITY, Bloomington, Ind., a state nonsectarian institution for collegiate education, open to both sexes, and founded in 1820. It has 60 instructors and a student attendance of over 1,000, under its president, Joseph Swain, LL.D. It has a library of 30,000 volumes, grounds and buildings of the value of \$200,000, with productive funds to the amount of \$600,000.

KANSAS UNIVERSITY, Lawrence, Ky., a State coeducational institution, chartered by the legislature in 1864 and opened in 1866. It has a faculty numbering 58, with a student body of over 1,000, under its president, F. H. Snow, Ph. D., LL.D. It has a library of 29,000 volumes, buildings and grounds estimated at \$450,000, and productive funds of about \$150,000 in value. Tuition is free to residents of the state. It gives instruction not only in the liberal arts, but in law, pharmacy, engineering, and the fine arts.

GEORGETOWN UNIVERSITY, Washington, D. C., founded in 1789, and controlled by the Roman Catholic body, has a faculty of 125 instructors and a student attendance of close upon 700, under the president, the Rev. J. D. Whitney, S. J. It has a small endowment, though the value of its site and buildings is nearly \$1,200,000. It has a library of 80,000 volumes.

GIRARD COLLEGE, Philadelphia, Pa., an institution organized in 1848 under the will of its benefactor, Stephen Girard, for the education and training of poor male white orphans, "free from sectarian doctrine." It has a faculty of nearly 70 instructors and a student body of 1,800, under its president, A. H. Fetterolf, Ph. D., LL.D. It has the handsome endowment of \$15,000,000, besides grounds and buildings (the main building is one of the finest specimens of Greek architecture in the New World) of the value of \$3,350,000, with a library containing over 16,000 volumes.

HAMLIN UNIVERSITY, St. Paul, Minn., was founded in 1854, and is a coeducational institution under the control of the Methodist Episcopal body. It has a teaching body, under its president, G. H. Bridgman, D. D., of 63, and a student attendance of 400. The value of its real estate and buildings is \$200,000, and it has over \$110,000 in productive funds, with a library containing 7,000 volumes. The University was originally founded at Redwing,

Minn., but was removed to its present site in 1880, and named after Bishop L. L. Hamline.

KENYON COLLEGE, Gambier, Ohio, founded in 1825 and controlled by the Protestant Episcopal body. It has a faculty 22 in number, and a student body of 170, in the college proper and in the theological seminary. Its president is W. F. Pierce, LL.D. It has a library of 33,000, with beautiful buildings, dormitories, etc., the value of which is \$310,000; it has also productive funds of nearly \$300,000 in value.

LAKE FOREST UNIVERSITY, Lake Forest, Ill., a coeducational institution of the Presbyterian denomination, founded in 1857 under the name of Lind University, and in 1865 changed to its present title. It has a faculty, over 120 in number, under President J. G. K. McClure, D. D., and a student attendance of 1,400. It is in affiliation with several institutions, including the Chicago College of Law, Rush Medical College, and the Chicago College of Dental Surgery. Besides its advanced course, it has preparatory departments, boys and girls (the latter known as Ferry Hall). It has productive funds of the value of \$500,000, and grounds and buildings, valued at \$600,000.

LEHIGH UNIVERSITY, South Bethlehem, Pa., founded in 1866 and endowed by Asa Packer. It has an engineering department, besides those in classics, in English branches, and in general science. It has a library of 100,000 volumes, productive funds of the value of \$2,000,000, and buildings and grounds valued at \$1,200,000. The faculty, 42 in number, is under the presidency of Thos. M. Drown, Ph. D., and it has a student body of about 375 in number.

LELAND STANFORD, JR., UNIVERSITY, situate at Palo Alto, Cal., was founded by the beneficence of the Stanford family and opened to students of both sexes in 1891, under the presidency of David Starr Jordan, LL.D. It has a student attendance of 1,225, and a teaching body of 85 instructors. The tuition is free. It has a library containing nearly 40,000 volumes, and a campus embracing 100 acres, the value of which and its buildings is estimated at \$2,000,000. It has productive funds valued at 3½ million dollars, and this has just been added to by Mrs. Stanford by the princely sum of \$30,000,000. The Palo Alto farm on which the university is built consists of 8,000 acres.

MAINE, UNIVERSITY OF, Orono, Me., a state institution, located eight miles north of Bangor, for the use of both sexes, and founded

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in 1868. It has a faculty of 35 professors and lecturers, and a student attendance of 325, under the president, Ab. W. Harris, Sc. D. It has productive funds of the value of \$220,000, and grounds and buildings valued at \$200,000, with a library containing 15,000 volumes. The tuition fees are but \$30 a year, and the room rent is free. The ancient classics are not taught. Its courses of study are science, agriculture, a preparatory medical course, and courses in civil, mechanical, and electrical engineering. An agricultural experimental station is connected with the institution, and military drill is required to be taught.

MOUNT HOLYOKE COLLEGE, South Hadley, Mass., an institute of learning for women, founded by Mary Lyon in 1837. It has 41 instructors and a student attendance of 400. Its present head is Mrs. E. S. Mead, M. A. The grounds, which comprise 70 acres, are not far from the Connecticut River; with the college buildings they are valued at \$450,000, and the institution has productive funds for its maintenance to the extent of nearly \$300,000, and a library containing 18,000 volumes.

OHIO STATE UNIVERSITY, Columbus, Ohio, is a coeducational, but nonsectarian institution, founded in 1870. It has a faculty of instruction numbering 95, a student body of 1,200, under its president, W. O. Thompson, D. D. Instruction is given not only in the ordinary college courses, but also in agriculture, in pharmacy, engineering, veterinary medicine, and law. It has a spacious campus in the heart of Columbus, 340 acres in extent. The value of these grounds and the university buildings is \$2,000,000, while there are productive funds controlled by the university of nearly \$600,000. The library contains 24,000 volumes. Liberal annual appropriations for the support of the institution are made by the State. Complete scientific laboratories have been added to the equipment of the university.

LOUISIANA STATE UNIVERSITY, Baton Rouge, La., a nonsectarian institution for the higher education of men, founded in 1860. It has a faculty of 21 instructors and a student attendance of 250, under its president, Thos. D. Boyd, M. D. Its grounds and buildings are valued at \$300,000, and has productive funds of the value of \$320,000, with a library of 21,000 volumes.

NEW YORK UNIVERSITY, University Heights, New York City, was founded in 1831. It is coeducational in the graduate pedagogical, and law schools, and has a faculty em-

bracing 116 professors and instructors, with a student attendance numbering close upon 1,400. Its president is H. M. McCracken, D. D., LL. D. Its grounds and buildings are valued at \$1,800,000, and it possesses productive funds estimated at \$1,600,000, besides a library containing 46,000 volumes.

OBERLIN COLLEGE, Oberlin, Ohio, founded in 1833, comprises a theological department, a women's and preparatory departments, and a conservatory of music. Its faculty numbers 83 instructors, of whom 24 are attached to the conservatory of music, and its student attendance of close upon one thousand. Its president is J. H. Barrows, D. D. Its grounds and buildings are valued at \$1,600,000, and it has productive funds to the extent of \$1,000,000, with a library comprising 50,000 volumes.

PENNSYLVANIA STATE COLLEGE, located at State College, Centre Co., Pa., was founded in 1859 as a coeducational institution; its name being given to it in 1874. It is especially an industrial school, giving particular attention to practical and scientific agriculture, besides instructing also in the mathematical, natural, and physical sciences. Its agricultural experimental station receives a subvention from the national government, and the state contributes to its general support from the proceeds of a federal land grant held in trust. The faculty numbers 48 instructors, and the attending students number 350. There is a library of 14,000 volumes, and it has productive funds of \$520,000, besides the value of its grounds and buildings, which are estimated at \$800,000.

POLYTECHNIC INSTITUTE, Brooklyn, N. Y. City, founded in 1854 to give instruction in the practical arts. President, Henry S. Snow, LL. D., with a faculty of instructors numbering 50, compose the teaching body; the attendant students are about 650 in number. The real estate of the Institute is valued at \$325,000, and the amount of its productive funds exceeds \$100,000. It has a library containing 8,000 volumes.

PRATT INSTITUTE, Brooklyn, N. Y. City, an industrial coeducational institution, founded in 1887, by a wealthy American merchant and philanthropist, combining academic, business, and manual training. It has 135 instructors in the various departments and a student attendance of close upon 3,000. Its president is Charles M. Pratt. The value of the grounds and buildings of the Institute exceeds \$1,000,000, and it has over \$2,000,000 of productive funds, with a library containing nearly 70,000

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volumes. In the industrial department, instruction is given in carpentry, blacksmithing, and other skilled trades, as well as in cooking and housekeeping.

RUTGERS COLLEGE, New Brunswick, N. J., founded in 1776 under the auspices of the Dutch Reformed Church, and to-day under the presidency of Austin Scott, LL. D., has a faculty of 35 instructors and a student attendance of close upon 300. In 1863, a scientific department was added to the Collegiate branch, under the name of Rutgers Scientific School. It has a library of 37,000 volumes.

SMITH COLLEGE, Northampton, Mass., an institution for women, founded in 1875, has 65 instructors and a student attendance of close upon 1,000. Its president is L. C. Seelye, D. D. It is nonsectarian, and has productive funds for its maintenance of \$670,000. The value of its grounds and buildings is estimated at \$660,000. The library contains about 8,000 volumes.

SYRACUSE UNIVERSITY, Syracuse, N. Y., is an institution founded in 1871 under the control of the Methodist Episcopal denomination and is open to both sexes. It has 117 instructors and a body of over 700 students, under its president, J. R. Day, LL. D., S. T. D. It has productive funds exceeding \$1,300,000, and a handsome library building containing 43,000 volumes. The value of its grounds and edifices is \$990,000.

VASSAR COLLEGE, Poughkeepsie, N. Y., founded in 1861 by the philanthropist, Matthew Vassar, as a school for the higher education of women. The institution was opened in 1865, on a beautiful site close to the Hudson, and has been highly successful. Besides the grounds, which cover 210 acres, Mr. Vassar gave the college an endowment of \$400,000; this sum has by later gifts reached a total of a million dollars. Its productive funds amount to a like sum. There are 56 instructors, and a student attendance of over 600. The library contains 30,000 volumes. Its president is James M. Tayler, D. D.

WASHINGTON UNIVERSITY, St. Louis, Mo., a coeducational but nonsectarian institution, incorporated in 1853, with a faculty of 155 professors and instructors, under its president, W. S. Chaplin, LL. D., and a student body of nearly 1,450. The departments besides the undergraduate one, which includes the college, embrace a law school, medical college, dental college, a school of fine arts, the O'Fallon Polytechnic School, and the Henry Shaw

School of Botany. To the University are attached three secondary schools, the Mary Institute for girls and the manual-training school. The value of the grounds and buildings is estimated at \$850,000, and the productive funds of the University are close upon a million.

WASHINGTON AND LEE UNIVERSITY, Lexington, Va., was first organized in 1749, and had many vicissitudes in its early career, until it received financial aid from General Washington and later on was rescued from obliteration by General R. E. Lee, who was for a time its president. Its present head is W. L. Wilson, LL. D., who has under him a faculty of 25 instructors and a student attendance of 150. The value of its grounds and buildings is \$200,000, and the university has productive funds to the amount of \$650,000. The courses of study include classics, literature, applied science, philosophy, engineering, and law. In the chapel adjoining sleeps General Lee, a recumbent statue in marble marking his resting-place. In the library are 41,000 volumes.

WESTERN RESERVE UNIVERSITY, Cleveland, Ohio, founded in 1884, after the removal from Hudson, O., of Adelbert College, which dates from 1826, to Cleveland, and which now constitutes the academic department of the W. R. University. Its faculty, under the president, Chas. F. Thwing, D. D., comprises 125 professors and instructors, while its student attendance numbers nearly 800. Besides a graduate school and Adelbert College, it has a college for women, and schools of law, medicine, and dentistry. Its buildings and grounds are valued at \$750,000, and it possesses productive funds estimated at \$1,250,000. Its annual income averages \$225,000. The library comprises about 50,000 volumes.

WESTERN UNIVERSITY OF PENNSYLVANIA, a coeducational institution located at Allegheny, Pa., and organized in 1819. It has a faculty of 105 instructors under President W. J. Holland, D. D., and a student attendance of 700. The value of its grounds and buildings is \$300,000, and the university has productive funds to the amount of \$350,000. The library comprises 16,000 volumes.

WILLIAMS COLLEGE, Williamstown, Mass., founded by a bequest of Col. Ephraim Williams, a Revolutionary soldier, who was killed in an ambush of French and Indians at the head of Lake George in 1755, and incorporated in 1793. Though nonsectarian it has turned out a large number of notable ministers and missionaries as graduates, especially

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those of the Presbyterian and Congregational Churches. It has a faculty of 30 instructors under its president, Franklin Carter, LL. D., and a student attendance of about 400. Its grounds and buildings are valued at \$460,000, and the institution has productive funds to the amount of \$1,100,000. The library contains 42,000 volumes. It has exceptionally good lecture rooms and dormitories, notably those known as the Mark Hopkins Memorial Hall and the Morgan Hall.

WORCESTER POLYTECHNIC INSTITUTE, Worcester, Mass., was founded in 1865 as a school of engineering. It has a faculty of 30 instructors under its president, T. C. Mendenhall, LL. D., and a student attendance of 225. It has extensive buildings, valued at \$500,000, which include a hydraulic laboratory and a complete testing plant, together with machine shops, magnetic and power laboratories, etc. The courses of study are in general science, in chemistry, and in civil, mechanical, and electrical engineering. It has a good library and productive funds exceeding \$600,000.

Collie, dog, 4, 18.

Collier, Jeremy.—(1650–1726.) An English dissenting clergyman and controversial and historical writer.

Collins Charles Alston.—(1828–1873.) An English artist and author; brother of William Wilkie Collins, son-in-law of Charles Dickens.

Collins, William.—(1788–1847.) A noted English painter, father of William Wilkie Collins.

Collins, William Wilkie.—(1824–1889.) A noted English novelist.

Collocolia, 5, 102.

Collodion, 5, 237;

for wounds, 1, 359.

Collyer, Robert.—Born at Keighley, England, 1823. A noted American Unitarian clergyman. In youth, he was apprenticed to a blacksmith, came to America in 1850, and settled at Shoemartown, Pa., where he joined the Unitarian church. In 1860 he founded the Unity Church in Chicago and in 1879 was elected pastor of the Church of the Messiah in New York, since when he has published several works, which include "Nature and Life," "The Life that Now Is," etc.

Collyer, Robert, 14, 95.

Influence of Manual Training on the life of, 7, 6.

on the American home, 1, 1.

Cologne (*Ger. Köln*).—A city, fortress, and free port on the Rhine, the capital of Rhenish Prussia. Founded by the Romans, it was

termed by them the *Colonia Agrippina*; later, it was city of the Franks, and in the 13th century was one of the famous Hanse towns, but losing its independence it came under the sway of Prussia in 1815. It is now one of the chief seats of German commerce, where tobacco, sugar, and *eau de Cologne* are largely manufactured. It is noted in the development of German architecture and painting; one of its chief attractions is the cathedral, perhaps the finest specimen of Gothic architecture in Europe, said to date back to the era of Charlemagne. The present edifice was begun in 1248, and was completed only about twenty years ago, having been neglected from the 15th century onward. Its towers and spires dominate the vast nave, and are the distinctive feature in the town. Other places of interest in the city are the Rathaus, or Hansa-Saal, with its statues and emblazoned arms of the civic burgomasters and guilds; the Church of St. Ursula, the Museum of Industrial Art, the Ringstrasse, great iron bridge, etc. Pop. (1900), 372,229.

Cologne, Three Kings of.—According to a legend of the Middle Ages, the three Magi or wise men who saw the star in the East at the birth of Christ. Their names were Gaspar, Melchior, and Balthazar. The legend asserts that their bones were deposited in the Cathedral at Cologne.

Colombia.—A republic of South America named in honor of Columbus. It is in the northern section of the continent, and is rich agriculturally and mineralogically. It produces gold, silver, and coffee in large quantities. It has been independent of Spain since 1811. The United States of Colombia has been its official designation since 1863. The government consists of a president, a senate, and a chamber of representatives. Area 504,773 sq. miles; pop., 4,500,000.

Colombia and Panama, 12, 177.

Colombo, Cristoforo, 10, 281.

Colon of Costa Rico, 13, 155.

Colon or large bowel, 1, 279.

Colonial Empire, Struggle for, 11, 13.

England ceases to grow her own food supply, 11, 14.

Causes of the search for new markets, 11, 13.

Colonna, Vittoria, 9, 229.

Colonna, Vittoria.—(1490–1547.) A noted Italian poet.

Color.—What is termed the color-sense is the power or ability to distinguish kinds or varieties of light and their distinctive tints. We owe the faculty of doing this to the structure

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of the eye and its elaborate connecting nerve machinery. The eye in man is especially sensitive to light, and the sensations we feel though it enables us to distinguish the different colors. Over 1,000 monochromatic tints are said to be distinguishable by the retina of the eye, though these numerous tints are, in the main, merely blendings or combinations of the three primary color sensations, the sense of red, of green, and of violet. Each of these colors, it has been demonstrated, is produced by light of a varying wave length, while white light is only light in which the primary colors are combined in proper proportion. Colored light, on the other hand, as Newton proved, may be produced from white light in one of three ways: First, by refraction in a prism or lens, as observed in the rainbow; second, by diffraction, as in the blue color of the sky, or in the tints seen in mother-of-pearl; and third, by absorption, as in the red color of a brick wall, or in the green of grass,—the white light which falls upon the wall being wholly absorbed, save by the red, and all that falls upon the grass being absorbed except the green. In art, color means that combination or modification of tints which is specially suited to produce a particular or desired effect in painting; in music, the term denotes a particular interpretation which illustrates the physical analogy between sound and color.

Color, 5, 303.

taught by Froebel's gifts, 7, 12.

Colorado.—One of the Mountain States of the U. S. of America. Bounded on the north by Neb. and Wyo., east by Neb. and Kan., south by Okla. and N. Mex., west by Utah. It is traversed from north to south by the Rocky Mountains, and contains some of the highest and best known summits of that range, including Pike's Peak, Long's Peak, Sierra Blanca, and others. It ranks first as a silver producing state, and also yields gold, lead, and other minerals in large quantities, aside from mining, its chief industry is stock raising; it is noted as a health resort for those suffering from pulmonary complaints. Part of its territory was included in the Louisiana Purchase and part was acquired from Mex.; admitted to the Union in 1876, from which fact it takes the name of the Centennial State; Denver is its capital and only large city; other chief towns are Colorado Springs, Cripple Creek, Leadville, and Pueblo; has 56 counties; area, 103,925 sq. miles; pop. (1900), 539,700.

Colorado River.—A river that flows through Utah and Ariz. and empties into the Gulf

of Cal. It abounds with cañons, the most famous of which is the Grand Cañon, with walls from 4,000 to 6,500 ft. high.

Colorado Springs.—A city in Colo., a popular summer resort, especially for invalids, situated near the base of Pike's Peak. Pop. (1900), 21,085.

Colosseum.—A notable Roman amphitheater, now in ruins, chiefly used as an arena for Roman games and gladiatorial combats. It was erected in Rome, near the Via Sacra, in the eras of Vespasian and Titus (72-80 A. D.) and was able to seat between 80,000 and 90,000 people. When Titus dedicated it, it is said that about 5,000 wild beasts were slain, while the inaugural games lasted for a 100 days. Around the arena, which was covered with sand (hence the origin of the word *arena*), the mighty concourse of people assembled, to witness the contests and games; while there were special seats reserved for the emperor, senators, and great folks of the Roman capital. The structure covered about five acres, was 610 feet in length, and 515 feet in width. The exterior, was 160 feet in height, and was built in three tiers of columns, surrounded by pilasters.

Colossus of Rhodes.—An immense bronze figure, said to have been over 100 feet in height, representing the Greek god Helios (the Sun), the chief deity of the Rhodians, at one time a leading maritime people living on the Island of Rhodes, in the Ægean Sea. The huge statue was the work of a sculptor, Chares of Lindus, who lived in the 3d century B. C., and who, it is affirmed, spent twelve years on the work. It has been supposed that, as it stood near the harbor, the god in bronze stood astride the entrance; this, however, is deemed an error. Nothing now is known of the artistic value of Chares's work, though it was counted among the Seven Wonders of the World. In 234 A. D., the statue was thrown down by an earthquake and lay an object of curiosity and wonder where it fell for over 400 years, when it was finally sold to a Jew for old metal.

Colt, Samuel, 12, 240.

Columbæ, a class of birds, 4, 103.

Columbia.—A poetical name of the U. S.

"Columbia".—Name of the American yacht that defeated the English yacht "Shamrock," in the contest for the America's Cup, in 1899.

Columbia.—(1) A town in Mo., seat of the University of the State of Missouri. Pop. (1900), 5,651. (2) A borough in Pa., noted for lumber and various manufactures. Pop. (1900),

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- 12,316. (3) The capital of S. C., on the Congaree River. It was founded in 1770 and became the state capital in 1790. It is the seat of the University of South Carolina. Pop. (1900), 21,108.
- Columbia, British.**—A province of the Dominion of Canada, lying on the Pacific Ocean on the west of the Dominion. It has the Northwest Territory on the north; Alberta and Athabasca on the east; and the United States on the south. It includes Vancouver and Queen Charlotte islands. The capital is Victoria, pop. (1901), 20,821; the other chief city is Vancouver, pop. (1901), 26,196. Population of the entire province (1901), 190,000. The country is rich in minerals and fish products.
- Columbia River.**—A large stream which rises in the Rocky Mountains and after traversing Wash. state, falls into the Pacific; is noted for its salmon fisheries.
- Columbian Exposition, 12, 405.**
- Columbus, Life of, 10, 281.**
referred to, 11, 36; 14, 122, 162.
- Columbus.**—(1) The capital of Ohio, an important railway center and noted for its manufactures, and for the state capitol and other fine public buildings. Pop. (1900), 125,560. (2) A city in Ga., on the Chattahoochee River, known for its iron and steel manufactures. Pop. (1900), 17,614. (3) A town in western Ky., which was an important strategic point in the early part of the Civil War (1861-62). Pop. (1900), 1,235.
- Column of July.**—In Paris, a monument erected in 1840, on the site of the Bastille, in honor of the citizens who were killed in 1830 during the attack on the royal government.
- Column of Trajan.**—A column erected at Rome in honor of the emperor, Trajan. His campaigns are represented in relief upon the base of the column.
- Column of Vendôme.**—In Paris, erected by Napoleon I. in honor of his victories over the Austrians and the Russians in 1805.
- Comb-bearer, 4, 379.**
- Comédie Française, La.**—The name of the Théâtre Français.
- Comédie Humaine, La.**—A picture of the manners and morals of the time written by Balzac. It includes the collection of his novels. The same characters appear and reappear throughout the series.
- Comedy of Errors, The.**—A play by Shakespeare.
- Comenius, Johann Amos.**—(1592-1670.) An eminent Moravian theologian and educational reformer. He was called to Sweden and carried out a complete educational reform in that country.
- Comets.**—See PLANETS, 2992.
- Comets** (Greek, *kómē*, hair).—Bright celestial bodies, distinguishable from planets by their irregular, elongated form and rapid motion, moving around the sun in parabolic or elliptical orbits. They are readily detected in the heavens at night, not only by their brightness and sweeping motion, but by their hairy, streamer-like caudle appendages, though there are comets that have no visible tail. They are usually spoken of as of two varieties, those seen by the naked eye, and those visible only through the telescope. An interesting feature in comets is their periodic revolution around the sun, the rate of which has been nicely calculated, as was the case by Astronomer Halley, who noting the great similarity between the elements of the comets seen in the years 1531, 1607, and 1682, fixed the reappearance of the latter for the year 1759, and this actually occurred. The comet of 1744, as seen in the Old World, possessed six tails. Another remarkable comet was the one of 1843, whose head it is stated, was only 96,000 miles from the sun's surface at its perihelion passage, and whose tail, not less than 100 million of miles long, appeared to sweep through two right angles in two hours. Encke's comet is also of interest in that it returns every $3\frac{1}{2}$ years. Biela's comet, first observed in 1772, is peculiar in that its dissolution or annihilation has been ascertained. Donati's comet, discovered by him in 1858, was remarkable for its great brilliancy, and for the number of months it was visible to observers.
- Comets, Parts of, 5, 132.**
Tail of, 5, 132.
- Comines, or Comynes, Philippe de.**—(1445-1511.) A distinguished French statesman and historian.
- Comitia curiata, 10, 209.**
tributa, 10, 211.
- Commerce, Departments of, 12, 180.**
Growth of, 11, 13.
Interstate, 12, 309.
- Commercial law for accountants, 13, 5.**
- Commission, 13, 109.**
- Committee, 11, 78.**
- Commodus, 10, 231.**
- Commodore.**—Early in the history of the U. S. navy this was a courtesy title given to the senior officer of a squadron. The official grade was created in 1862, and was defined as "the next above that of captain." It was equivalent to the rank of brigadier-general in the army. Until 1862 a captain was the high-

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- est naval officer known to the law, and when he or a flag officer commanded more than one vessel at a time he was popularly called a commodore, and this title, once conferred was seldom withdrawn. It was abolished by the naval personnel act, passed in March, 1899, and the number of rear-admirals was increased by the same act to eighteen.
- Common law**, 11, 222.
- Common rail**, 4, 131.
- Common stock**, 13, 109.
- "Commoner," The**.—A newspaper established at Lincoln, Neb., by William J. Bryan, soon after his second defeat for the presidency, in 1900.
- Commons**, 11, 222.
- Commonwealth in England**, 10, 319.
- "Commune Affranchie,"** 10, 345.
- Como**.—In Italy; the capital of the province of Como. It contains one of the finest cathedrals in Italy. Pop. (1899), 36,426.
- Como, Lake of**.—A lake in northern Italy, famed for its beauty.
- Company, Limited**, 13, 145, 340.
- Companionship for Children**, 2, 193.
- Compass, Mariner's**, 5, 324.
Boxing the, 5, 324.
- Compasses**, 7, 263.
- Compayre's statistics on infant mortality**, 2, 60.
- Competition, Value of**, 2, 290.
- Compliment to the vizier, Turkish fable**, 3, 184.
- Composition, Literary**, 8, 423.
Argumentation, 8, 426.
Choice of words, 8, 429.
Filling-in, 8, 428.
Grammar, 8, 423.
Letter-writing for practice, 8, 433.
Naturalness, 8, 432.
Plan, 8, 427.
Process of, 8, 424.
Suggested subjects for, 8, 434.
- Compounds in chemistry**, 5, 150.
- Compromises, Political**, 11, 361.
- Comstock, Anthony**, 12, 240.
- "Comte de Monte-Cristo."**—A novel by Alexandre Dumas, published in 1844.
- Comus**.—The god of mirth.
- Conant, Charles A.**, on "The American Business Woman," 7, 440.
- Concentration, Abuse of**, 8, 95.
- Concepcion**.—(1) A province of Chili. (2) The capital of the province of Concepcion; an important trading point. Pop. (1895) of the province, 188,190; of the capital, 39,837.
- Conch**, 4, 372.
- Conchyliastes**, 4, 357.
- Conciergerie** (*kôn-syerzh-rê'*), **La**.—The old prison of the Palais de Justice in Paris, became widely known during the Reign of Terror. Three hundred and twenty-eight prisoners were executed there in a single week. Marie Antoinette was imprisoned there and her cell might be seen until 1871, when it was destroyed by the Communists.
- Concord**.—(1) The capital of N. H., formerly called Rumford; incorporated as a city in 1853. Its manufactures comprise cotton and woolen goods, leather, harnesses, vehicles, etc. Pop. (1900), 19,632. (2) A town in Mass., the residence of Emerson, Hawthorne, Thoreau, and other *literati*; it was the center of what is known as the "Transcendental Movement," and the seat of the "Concord School of Philosophy." In 1775 it was the scene of an engagement between the British and Colonial forces. Pop. (1900), 5,652.
- Concord (Mass.), Battle of**, 11, 80.
- "Concord," The**.—A war vessel which participated in the battle of Manila, May 1, 1898.
- Condé** (*kôn-dă'*).—A famous French family which took its name from the town of Condé in the department of Nord, France. The members were representatives of the Bourbon house. The greatest of the family was Louis II de Bourbon, called "The great Condé" (1621-1686), and he was most famous on account of his brilliant military career.
- Condensation**, 5, 161.
- Condon, Mrs. A. C.**, 14, 53.
- Condor**, 4, 138.
of the Andes, 4, 138.
- Conduction of heat**, 5, 271.
- Condyles**, 1, 273.
- Condyloid process**, 1, 273.
- Cone**, 7, 254.
To find the solid contents of a, 13, 152.
of the frustum of a, 13, 152.
- Cones of pine**, 4, 413.
- Coney Island**.—A popular summer resort for recreation and amusement, visited by multitudes of people from the various boroughs of New York City. It is not an island, but is on the southern shore of Long Island.
- Confederate battle-flag order**, 12, 236.
- Confederate Brigadiers**.—A political epithet applied to the southern Democratic leaders after the war. It originated with James G. Blaine in Congress, and for a time was in general use by northern political speakers and newspapers.
- Confederate cabinet**, 11, 474.
Memorial Day, 13, 98.
States of America, 11, 475.

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Confederation, Articles of, 11, 80, 222.

of the Rhine, 10, 356.

"**Confessions**," **Les**.—An autobiographical series by Jean Jacques Rousseau (1781-82).

Confidence, Retaining a child's, 2, 217.

Conflicting duties, 2, 6.

Father, The indifferent, 2, 10.

Ideal in marriage, 2, 7.

Ideals, Conflict of, 2, 9.

Marriage, The ideal in, 2, 7.

Mill, Mrs. John Stuart. Inspiration to her husband, 2, 8.

Mother, The ideal, 2, 8.

Mother's duty to children, 2, 10.

Parental duties, 2, 10.

Wife for a bad man, A good, 2, 9.

Confucius, Life of, 10, 148.

Conglomerate, 5, 440.

Congo State.—A free, independent State in Central Africa, founded as the Congo International Association in 1883 by Leopold II., King of the Belgians, who remains practically the sovereign. It lies along the Congo River and its tributaries. The population is negro. Gold, iron, copper, lead, coffee, cotton, sugar, cocoa, indigo, and tropical fruits are its products. Area 802,000 sq. miles. Pop., 8,000,000.

Congo Free State, 11, 23.

Congress, 11, 223.

Library of, 12, 319.

"**Congressional Globe**."—The forerunner of the "Congressional Record." The "Globe" was originally issued as a newspaper, containing the proceedings of Congress, between 1833 and 1873. It was followed by the "Register of Debates" and this in turn by the "Congressional Record," as it exists to-day.

Congressional Record.—A complete report, stenographically taken, of the debates and proceedings of Congress, from Dec. 1873 to the present. It is issued daily while Congress is in session, and each member of that body receives gratuitously a special number of copies which he may distribute among his constituents. The subscription price is \$8 for the long term and \$4 for the short term.

Congressman-at-large, 12, 240.

Congress of Mothers, National, 2, 375.

Congreve, William.—(1670-1729.) An English dramatist, who wrote principally along the line of comedy. While his works are marred by the coarseness of his day, his works take a prominent place in the history of plays and play-writing.

Conington, John.—(1825-1869.) An English classical scholar and educator.

Conium maculatum, 5, 2.

Conkling, Roscoe, 12, 203, 240.

Connaught.—The extreme western province of Ireland. It comprises the counties Roscommon, Galway, Mayo, Sligo, and Leitrim. Pop. (1901), 649,635.

Connecticut.—One of the New England States, and one of the original thirteen states of the American Union. Bounded on the north by Mass., east by R. I., south by Long Island Sound, west by N. Y. Its surface is hilly and its chief agricultural products are grain and tobacco; it is chiefly a manufacturing state, the leading articles being cotton and woolen goods, silks, hardware, firearms, and clocks. It was settled by the Dutch and by colonists from Mass. in 1633, and English colonies were formed soon afterward. Called the Nutmeg State, from a popular fiction that the "Yankees" of Conn. manufactured wooden nutmegs. The State is divided into eight counties; the capital is Hartford; its other leading cities are New Haven, the seat of Yale University, Bridgeport, Danbury, Meriden, New Britain, Waterbury, Norwich, and Stamford. Area, 4,900 sq. miles; pop. (1900), 908,355.

Connecticut and New Haven colonies united by charter, 11, 46.

Connecticut River.—A river of New England which flows into Long Island Sound. It is about 500 miles in length and several flourishing towns are situated on its banks, *viz.*, Northampton, Springfield, Hartford, Middletown, etc.

Connecticut warbler, 4, 186.

Conrad I.—(Died 918.) King of Germany (911-918).

Conrad II.—(Died 1039.) King of Germany (1024-1039) and Roman emperor.

Conrad III.—(1093-1152.) King of Germany (1138-1152).

Conrad IV.—(1228-1254.) King of Germany (1250-1254).

Conrad, Holmes, 12, 180.

Conscience Whigs.—Members of the Whig Party in Mass. who opposed the "Cotton Whigs" on the question of slavery, about 1850.

Conscript Fathers.—Roman senators, so called because their names were "written together" on the registers.

Conservation of energy, 5, 171.

mass, Law of, 5, 170.

matter, Law of, 5, 149.

Consignee, 13, 109.

Consignment, 13, 109.

Consignor, 13, 109.

Consols, 13, 109.

Constable, John, 9, 284; 14, 275.

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Constance, Compact of, 10, 276.

Council of, 10, 289.

Treaty of, 10, 275.

Constantine, 10, 232, 259.

Constantine XI., 10, 288.

Constantinople (Turk., STAMBOUL).—Capital of the Ottoman empire (anciently Byzantium), situated on the Bosphorus, the Golden Horn, and the Sea of Marmora, in European Turkey. The beauty of its situation, with its seven hills, numberless palaces, mosques, minarets, and gardens, make it exceedingly attractive, while it is important to trade and commerce as a connecting link between the eastern and the western worlds. Tramways now connect the city with its many suburbs, such as Galata, Pera, etc., while ferries across the Bosphorus communicate with the Asiatic city of Scutari. Constantine the Great made Byzantium the capital of the Roman empire in 330 A. D., and it has been subject to many sieges, notably those of the Saracens, the Latins, Byzantines, and finally the Turks, who have occupied it since 1453 and made it the residence of their sultans. The most striking of its churches is the Mosque of St. Sophia, which has a mighty and graceful dome: it is in the form of a Greek cross, adorned with over 100 columns and 4 minarets. Another fine church is the mosque of Suleiman I., of much interest also are the Greek Hippodrome (the obelisks of the Atmeidan), the Citadel of the Seven Towers, the numerous bazaars, and the imperial palaces on the Bosphorus. The magnificence and luxury of one of the latter (Tcheragan Serai), in the style of the new Turkish Renaissance, are great. Its population exceeds a million.

Constantinople, Fall of, 10, 288.

"**Constellation**," *The*, 11, 223.

Constellations of stars, 5, 135.

The twelve, 5, 140.

Constipation in infants, 2, 54.

Treatment of, 1, 333.

"**Constitution**," *The*, 11, 224.

Constitution, 11, 80.

adopted, *The* federal, 11, 150.

Hamilton's efforts to popularize the, 11, 178.

Constitution, Amendments to.—A grave defect in the original Articles of Confederation was that they could be amended only by the unanimous consent of the states. Much needed changes were proposed, but, failing of ratification, a convention to consider amendments was called in 1787. The deliberations of this body resulted in the present Constitution, which provides that: "The Congress, whenever two-thirds of

both houses shall deem it necessary, shall propose an amendment or amendments to this Constitution, or, on the application of the legislatures of two-thirds of the several states, shall call a convention for proposing amendments, which in either case shall be valid, to all intents and purposes as part of the Constitution, when ratified by the legislatures of three-fourths of the several states or by the conventions thereof, as the one or the other mode of ratification may be proposed by the Congress." Only fifteen of the many proposed amendments to the Constitution have been ratified. They refer to (1) freedom of speech, the press, and religion; (2) right to establish state militia; (3) quartering of troops in private houses; (4) security against unreasonable search and seizure; (5) capital crime; (6) criminal prosecutions; (7) trial by jury under common law; (8) forbidding excessive bail or fines or cruel and unusual punishment; (9) relation of constitutional to natural rights; (10) powers reserved to the states; (11) suits of nonresidents against states in Federal courts; (12) election of President and Vice-president; (13) slavery; (14 and 15) abridgment of the franchise, etc., by the states. The first 10 amendments were submitted to the state legislatures by Congress in 1789, at the first session of the First Congress, and were ratified by the required number of states on or before Dec., 1791. The eleventh amendment was adopted in 1798; the twelfth, 1804; the thirteenth, 1865; the fourteenth, 1868, and the fifteenth, 1870.

Constitution of bodies, 5, 253.

Constitution on trial, 11, 169.

State, 11, 81.

Constitutional Union Party, 11, 362.

Constitutionalists, 11, 224.

Constitutions of the United States and Great Britain, Distinctions between, 11, 224.

Constitutions of Clarendon, 10, 261.

Constructionists, Liberal, 11, 169.

Strict, 11, 169.

Consuls, 11, 240.

Roman, 10, 210.

Consumption remedied by music, 9, 183.

Contagious diseases, 1, 346.

Continental congress, 11, 81.

Continental money, 11, 81.

Continental soldiers, 11, 82.

Continents, *The* — *How Named*. — Australia (formerly New Holland derives its name from its geographical location (*Australis*, southern); Africa was originally the name of a small tract on the north coast, still surviving in the *Friga*

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of the Tunisian Tell, and was extended under Roman influence to the whole of the "Dark Continent." The origin of the term Asia cannot be accurately determined: it is supposed to have been a local name given by the Greeks to the plains of Ephesus, and afterwards extended to the Anatolian peninsula, and later to the whole of the continent. Europe (Lat. *Europa*) is so named by the Asiatic Greeks, either from its wide coast or from the Phœnician Princess Europa.

Contraband goods, 13, 109.

Contraband of war, 11, 475.

Contractor and Builder, 13, 415.

Convection of heat, 5, 271.

Convention, Diplomatic, 12, 240.

Convention, Nominating.—A body of delegates or representatives assembled to nominate candidates for office. Early in the history of this country, aspirants to office nominated themselves, or were placed in nomination by a caucus. (See CAUCUS.) The first state convention of which we have knowledge was held at Harrisburg, Pa., in 1788. The Anti-Masons held a national convention at Baltimore in 1831, and soon thereafter the Whigs followed their example, which has since become general among all parties.

Convention troops, 11, 82.

Conventions, Revolutionary, 11, 82.

Conversation, Art of, 1, 77.

Culture essential to good, 1, 78.

Importance of sympathy in, 1, 80.

of a hostess, 1, 80.

Proper topics of, 1, 79.

Shyness a barrier in, 1, 81.

Small talk, 1, 79.

Tact in, 14, 194.

Conway, Frederick B. (1819-1874).—A noted English actor.

Conway, Hugh. (The *pseudonym* of FREDERICK JOHN FARGUS).—British novelist.

Conway, Thomas, 11, 82.

Conwell, Russell H., on the secret of success in life, 8, 125.

referred to, 14, 369.

Cook Islands.—In the South Pacific, an archipelago belonging to Great Britain. The chief island of the group has a population of about 3,000.

Cook, James.—(1728-1779.) A famous English navigator.

Cooke, Rose Terry.—Born at West Hartford, Conn., 1827; died at Pittsfield, Mass., 1892. An American author. Her chief works are "Poems by Rose Terry," "Somebody's Neighbors," "Steadfast," etc.

Coolie.—A term at first applied to one of the aboriginal hill tribes of India. It now has a broader meaning and is often applied to any unskilled Asiatic laborer. In a more particular sense, it describes the ordinary laborer of China or Japan who, under contract, emigrates to a foreign country. Europeans in Hindostan call all laborers coolies. In the U. S. Chinese laborers are often spoken of as coolies, and their appearance here in large numbers years ago resulted in protests and political action by bodies of workingmen, who urged that the newcomers, occupying squalid quarters and living cheaply, underbid white labor. The agitation resulted in national legislation by which the immigration of the Chinese was stopped.

Coon, The, 4, 55.

Coon-dogs, 4, 55.

Coon-hunting, 4, 55.

Cooper, Peter, 12, 287.

Cooper, Samuel, 9, 275.

Cooper's hawk, 4, 140.

Cooperstown.—A town in Otsego County, N. Y.; founded by the father of James Fenimore Cooper, the author. It is a favorite summer resort. Pop. (1900), 2,368.

Cooper Union.—An institution in New York founded by Peter Cooper and intended for the instruction of the working classes. The plan of instruction provides for free schools, free reading, and lecture rooms, etc.

Coote, Sir Eyre.—(1726-1783.) A distinguished British general, noted for his service in India.

Copenhagen.—The capital and commercial center of Denmark, situated partly on the island of Zealand and partly on the island of Amager, on the strait of the Sound. It is commanded by the citadel, Frederikshavn, but its fortifications have been dismantled. The city was founded in the 12th century and became the capital in 1443. It has suffered much by sieges and bombardments, and especially by the fire of the British fleet in Sept., 1807. In the adjoining harbor, Nelson, in 1801, destroyed the Danish fleet. The city is specially interesting to art-lovers and antiquaries, for it is rich in the masterpieces of Thorwaldsen, as well as in its natural history specimens, its numismatical collections, and in its store of antiquities, including early stone and bronze implements, and relics of prehistoric times. The chief public buildings are the University of Copenhagen, the Church of Our Lady, the metropolitan church of the kingdom, the Trinitatis and the Holmens Kirke, the Castle of Rosenborg, the Palace of Christiansborg, with its fine library, and the Royal Museum of

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- Natural History. Its commerce, chiefly foreign, is considerable, but its manufactures are local and trifling. It has numerous squares, the finest of which is the new King's Market. In the fine harbor are generally to be seen several ships of the Danish fleet, and many vessels of the merchant navy. Pop., with suburbs (1895), 408,300.
- Copenhagen, Battle of**, 10, 353.
- Copernican theory**, 10, 279.
- Copernicus** (*kō-per' ni-kus*).—(1473-1543.) The founder of modern astronomy, and the system is known as the Copernican.
- Copernicus**, 14, 96.
- Copley, John Singleton**, 9, 329.
- Coppée** (*kōp-ā'*), **François Édouard Joachim**, was born at Paris in 1842. He is a noted French writer of plays. He has published a number of poems, prose writings, and plays.
- Copper**.—The most widely distributed, as it is the earliest of metals used by man. In the island of Cyprus, whence the metal derived its Latin name (*cuprum*), it is known to have been smelted by the Greeks and Romans at an early age and used by them in the peaceful arts as well as in war. By them it was generally mixed with other metals, chiefly tin, and formed what we now term bronze. Copper is not only found abundantly in its native condition, as in our Lake Superior mines and in those of Russia and Great Britain (especially in Wales and Cornwall), but in various other ores, such as cuprite, malachite, copper pyrites, etc. Mixed with tin it forms bell-metal, and with zinc it forms brass and other alloys. This useful metal is both ductile and malleable, as well as very tenacious, and it is one of the best conductors of heat and electricity. It has a peculiar red color and a bright lustre. It is largely used in the arts, alike in its pure state and alloyed with other metals. The chief copper-producing countries are Spain and Portugal, Australia, Canada, Mexico, Chili, Germany, and Japan; but by far the largest yield is in the United States, where it is freely found in Michigan, Montana, and Arizona. The yield in this country of domestic copper was in the year 1899 estimated at 615,887,360 pounds. From our extensive native supply, copper is now a large export of the United States, in addition to its great and increased use at home in manufactures.
- Copper ores**, 5, 439.
- Azurite, 5, 439.
 - Blue carbonate of copper, 5, 439.
 - Copper pyrites, 5, 439.
 - Green carbonate of copper, 5, 439.
 - Malachite, 5, 439.
- Copper pheasant**, 4, 127.
- Copper-plating**, 5, 211.
- Copper**, Properties of, 5, 210.
- pyrites, 5, 210.
 - Salts of, 5, 211.
 - Sources of, 5, 210.
 - Uses of, 5, 211.
 - Valences of, 5, 211.
- Copper crystal, Form of**, 7, 257.
- Copper, group of chemical elements**, 5, 210.
- Copperas**.—The commercial term for the sulphate of iron or ferrous sulphate. It is known also as green vitriol and is obtained by dissolving iron in dilute sulphuric acid. On a large scale, copperas is also obtained from iron pyrites, the mineral ferric sulphide, which oxidizes readily in the presence of moisture. It forms double salts with the sulphates of potassium and ammonium. Copperas is used in the arts in the dyeing of black fabrics and in the manufacture of ink; it is also an ingredient of some medicines. It is composed of 25.7 per cent. of protoxide of iron, 28.9 per cent. of sulphuric acid, and 45.4 per cent. of water.
- Copperhead, The**, 4, 245, 248, 249.
- Copperhead**, a political nickname, 11, 475.
- Copperhead**, Characteristics of the, 4, 249.
- Home of the, 4, 249.
- Copts**.—Descendants of the ancient Egyptians. Their language, the Coptic, was used in Egypt until within the past two centuries, and has given place to the Arabic.
- Copying as work for women**, Office, 7, 359.
- Copyists for literary people**, Women as, 7, 361.
- Copyright**, 13, 109.
- Coquelin** (*kōk-lan'*), **Benôit Constant**.—A noted French actor, born in 1841 at Boulogne-sur-Mer. He has appeared recently with Sara Bernhardt.
- Coques, Gonzales**, 9, 293.
- Coraco-brachialis muscle**, 1, 275.
- Coral**.—The skeleton or hard structure developed in the tissues of minute animal life, resembling somewhat the sea-anemone, and inhabiting comparatively shallow and warm water in the Mediterranean and mid-Pacific. In these seas, the polyp or anthozoa, by their secretions, construct reefs or atolls, or branching tree-like structures, usually red in color, which when hard is susceptible of a high polish. These reefs often extend to a considerable length, and form barriers in shallow waters at a depth not greater than from 15 to 30 fathoms. The coral-producing animals generally live in colonies or communities, and form, in many instances, entire islands, such as may

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- be seen among the Keys and Everglades of Florida.
- Coral**, 4, 378.
Formation of, 4, 378.
- Corbett**, Boston, 12, 240.
- Corbett**, William, 11, 222.
- Corcoran Art Gallery** was established in Washington, D. C., by William Wilson Corcoran. It contains a valuable collection of marbles, bronzes, and a gallery of paintings.
- Corcyra**, or **Kerkyra**.—The ancient name for Corfu, an island belonging to Greece in the Ionian Sea, off the coast of Epirus or Albania. Its area is 431 square miles, its length being about 40 and its greatest breadth about 20 miles. The island was colonized by the Corinthians in 734 B. C., and it soon rivaled the mother country (Corinth), and became an important maritime state. Owing to dissensions which sprung up with the parent state, the Peloponnesian War was precipitated, after which it suffered many vicissitudes, and was for a time a naval station of the Romans. In 1815, with the Ionian Islands, Corfu came under the protectorate of Great Britain, but in 1864 was transferred to Greece. The population of the island was, in 1896, 124,578, and that of the town of Corfu, 18,000.
- Cord foot**, 13, 148.
Size of a, 13, 148.
- Corday**, Charlotte, 10, 420.
- Cordite**, 5, 174.
- Cordova** (*kor' dō-vä*).—The capital of a province of the same name on the Guadalquivir River in Spain. It is famous for its manufacture of leather. From it we get the word cordovan and cordwainer—an obsolete word for a shoemaker. In the Middle Ages it was the center of art learning and literature. It had then one million inhabitants. It derived much of its architectural splendor from the Moorish influence.
- Corea**.—See KOREA.
- Corelli**, Marie, is the adopted daughter of the late Charles Mackay; was educated for a musical career, but turned to the writing of fiction, and has attained a popularity beyond that of many other novelists.
- Corfu**.—(1) A nomarchy of Greece. (2) The largest of the Ionian Islands. (3) A seaport and the capital of Corfu. Pop. commune (1889), 28,000.
- Corinth**.—A city of Greece near the Gulf and Isthmus of Cornith. It was noted in very early times as a center of commerce, literature, and art. In modern times it has been taken and retaken by the Turks. It was destroyed by an earthquake in 1858 and was rebuilt 3 miles from the old site. Pop. commune (1889), 11,150.
- Corinth** (Miss.), **Battle of**, 11, 475.
- Corinth**, **Fall of**, 10, 208.
- Coriolanus**, **Cnæus Marcius**.—A Roman legendary hero, who lived in the 5th century B. C.; leader of the Volscians against Rome.
- Cork**.—(1) The largest county of Ireland. (2) The capital of the county of Cork, and third city of Ireland. Pop. (1901), 75,978.
- Cork** (Latin *cortex* bark).—The outer rind or bark of a species of oak (*Quercus Ilex* or *Q. suber*), a native of southwestern Europe, chiefly Spain, Portugal, and southern France, with the islands of Sardinia and Corsica. The imperviousness of cork (its walls are waterproof) to liquids, and its compressibility and elasticity render it suitable for stoppers to bottles and for bungs to barrels; its other important uses are as inside soles, for hat frames, life-preservers, mattresses, false limbs, and for the construction of lifeboats. In Spain, walls are sometimes lined with cork to keep out dampness, while, with caoutchouc, it constitutes the material, Kamptulicon, used as a carpet or floor-cloth.
- Cork**, 4, 486.
- Cork Tree**.—A species of oak which grows from 30 to 40 feet in height, and has a remarkable development of soft cellular tissue in its bark, known and utilized as cork. The bark is taken from trees generally after their twentieth year, and is removed every eight or ten years—an operation, which, curiously enough, instead of blighting the tree, promotes a hardier and more vigorous growth, and leads to the production of cork of a finer and closer texture. For its uses, etc., see CORK.
- Cork tree**, 5, 1.
- Corliss**, George Henry, 12, 241.
- Corn**.—In the United States, we mean by the term Corn maize or Indian corn, a species of the grass family, which next to rice is perhaps the most important of food plants. In Great Britain, the term is generally applied to such cereals and farinaceous grains as wheat, rye, barley, and oats. The maize plant has been long known in this country, being originally, it is supposed, a native of Mexico, and largely in use by the Aborigines. It forms about two-thirds of all the grains grown in the United States, the average annual yield being over 2,000 million bushels. Its chief use is as a food for cattle, sheep, and hogs, though when coarsely ground it makes hominy and when finely ground cornmeal. Indian corn is, moreover, a large constituent of starch, glucose, and grape sugar, while the leaves and

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- stalks of the plant, when dried, are largely used for cattle fodder. Besides the sweet or sugar corns, there is also the variety in use as pop corn, with its small kernels and ears. Broom corn is *Sorghum Dora*, while Kaffir corn is a sweetened sorghum, akin, probably, to the Arabian millet or to the Chinese sugar-cane.
- Corn**, 5, 83.
 Broom, 5, 83.
 Indian, 5, 83.
- Corn Laws**, Repeal of the, 11, 15; 13, 115.
- Corn Maize**, 5, 83.
- Corn**, Symbolism of, 1, 198.
- Corneille** (*kor-nay'*), **Pierre**.—(1606-1684.)
 A noted French dramatist.
- Cornelia**, mother of the Gracchi, 10, 218, 394.
- Cornelius, Peter von**.—(1783-1867.) A noted German painter, called the leader of the new school of German art.
- Cornell, Ezra**, 13, 259.
- Corner**, 13, 115.
- Cornmint**, 5, 67.
- Cornus alternifolia**, 4, 431.
 Florida, 4, 432.
- Cornwall**.—(1) A county of England lying west of Devonshire. Pop. (1891), 322,571.
 (2) A port of entry in Ontario, Canada. Pop. (1901), 6,704.
- Cornwallis, Charles**, 11, 82.
- Corolla**, 5, 10, 11.
- Corona borealis**, the northern crown, 5, 146.
- Corona of the sun**, 5, 121.
- Coronis**, 10, 91.
- Corot** (*ko-rō'*), **Jean Baptiste Camille**.—(1796-1875.) A celebrated French landscape-painter.
- Corot, Jean Baptiste Camille**, 9, 268.
- Corpus Christi Day**, 13, 95.
- Corregio**, 9, 245.
- Correspondence**, Art of, 1, 87.
 Business letters, 1, 89.
 Formal, 1, 88.
 Ink, 1, 90.
 Intimate, 1, 88.
 Kind of paper to use, 1, 89.
 Legible writing imperative, 1, 90.
 Letter of condolence, 1, 91.
 Love letters, 1, 89.
 Proper form of address, 1, 90.
 Titles in addresses, 1, 90.
 Use of date, 1, 91.
- Corrosive sublimate**, 5, 212.
- Corsica**.—An island and department of France, situated in the Mediterranean, south of Genoa, and separated from Sardinia by the Strait of Bonifacio. At the close of the First Punic War it was acquired by the Romans, and has been held successively since by Vandals, Goths, Franks, Saracens and Pisans, and from the 14th century by the Genoese. It was also held for a time by the British, and since 1796 has been occupied by France. It was the birthplace of Bonaparte. The country is mountainous and is much beset by brigands and vendettas. The capital is Ajaccio, but the chief town is Bastia. The population is 290,000, a large proportion of which speaks Italian.
- Corsica taken by France**, 10, 341.
- "Corsican Brothers, The."**—A French play; translated by Boucicault.
- Cortelyou, George B.**, 12, 180, 181, 243.
- Corte Nuova, Battle of**, 10, 275.
- Corte-Real** lands in Labrador, 11, 37.
 Voyage of, 11, 37.
- Cortés, or Cortez, Hernando, or Fernanda**.—(1485-1547.) A celebrated Spanish soldier; conqueror of Mexico.
- Cortez, Hernando**, 11, 37.
 appointed Governor and Captain-General of Mexico, 11, 38.
 takes the city of Mexico, 11, 38.
 Tabasco, 11, 37.
- Corydon**.—In poetry, a name applied to a shepherd, or country swain.
- Cosmo de' Medici**, 10, 278.
- Cosmos Club**.—A society in Washington, D. C., organized in 1878 and composed chiefly of scientists.
- Cossacks**.—A people of an uncertain origin (probably Tatars or Slavonians), of a warlike character, and whose habitat has chiefly been Russia, Caucasia, and Siberia. Historically, they are usually spoken of as forming two branches, viz., the Don Cossacks, who inhabit the steppes of Russia, and those of Little Russia, the turbulent and predatory Cossacks to be found, in the main, on the banks of the Dneiper. There are also those residing on the frontiers of Russia, in southern Siberia, and those inhabiting the region of the Caucasus. They constitute an important part of the Russian army, being very serviceable as light cavalry. They have borne the character of a gallant, independent, and democratic people whose spirit has shown itself at times troublesome to Russia in occasional unsuccessful revolts.
- Costa Rica**.—Translated from Spanish into English, it literally means "rich coast." The name of a Central American republic. The soil is fertile, coffee is the principal crop, and there are some very valuable gold mines. The country, which has been independent of Spain since 1821, is governed by a president and a

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- house of deputies. Area, 23,000 sq. miles; pop. (1899), 310,000.
- Coster, or Koster, Laurens Janszoon.**—A citizen of Haarlem, whose life is veiled in obscurity, but for whom the Dutch claim the honor of having invented the art of printing with movable types (about 1440).
- Cotman, John Sell.**—(1782-1842.) A noted etcher and landscape painter of England.
- Cotopaxi.**—A volcano of the Andes, near Quito, Ecuador. The highest active volcano known. Height, 19,613 ft.
- Cottle, Joseph.**—(1770-1853.) An English bookseller and poet.
- Cotton.**—The hairy covering of the seeds of various species of *Gossypium*, a genus of plants which belong to the mallow family. The plant is indigenous to China, India, Brazil, Egypt, and the southern regions of the United States. Next to wheat, corn, and rice, cotton is perhaps the most valuable to man in the manufactures. The cotton plant, which is cultivated only in tropical or subtropical regions, is a herbaceous, or shrubby perennial plant, growing from 3 to 12 or 15 feet in height. It has large and showy flowers, and it is from the long filaments of the seeds that cotton is derived. In each pod of the plant are several chambers which break open and disclose a globular mass, known technically as the "cotton boll" covering the seeds. The cotton, when cleaned and worked up, is manufactured into all kinds of fabrics, for domestic and for fancy purposes, such as calicoes, cambrics, shirtings, and also as muslin, laces, etc. Yarn, of the finer sorts, is made usually from Egyptian and the sea island cottons. The manufacture and consumption of all varieties are now enormous; the production in the U. S. alone for the year 1899 being 9,345,391 bales (of an average weight of 500 lbs.). The world's consumption for the same year was estimated at 13,500,000 bales. The chief states growing cotton in America are Texas, Georgia, Mississippi, Alabama, North and South Carolina, Arkansas, Louisiana, and Tennessee.
- Cotton boll, 5, 57.**
 gin invented by Whitney, 5, 290.
 plant, 5, 57.
 States, 11, 476.
 Yield of, in the United States, 5, 57.
- Cottons, To wash colored, 1, 29.**
- Cottonseed cake, 5, 57.**
 oil, 5, 57.
- Cottontail, 4, 40.**
- Cottonwood poplar, 4, 428.**
- Cotton Gin, The.**—For a history of this important invention, see WHITNEY, ELI.
- Cotton, John.**—Born at Derby, England, 1585; Died at Boston, Mass., 1652. A Puritan divine who settled in Boston in 1633; sometimes called "the patriarch of New England." He is said to have introduced in New England the practice of keeping the Sabbath from the evening of Saturday to the evening of Sunday.
- Cotyledons, 4, 396.**
- Couagga, 4, 91.**
- Coudert, Frederic René,** on the "Young Man in the Law," 13, 78.
- Coues, Elliott.**—Born at Portsmouth, N. H., 1842; died, 1899. He was a celebrated ornithologist and biologist. His principal works are "Key to North American Birds," and "Field Ornithology." He also edited the narration of Lewis and Clarke's travels, with copious notes.
- Cougar, 4, 73.**
- Coughs, Treatment of, 1, 323.**
- Coulomb, 5, 420.**
- Council, 12, 241.**
- Council Bluffs.**—A city in Iowa, a large railway and trading center. Pop. (1900), 25,802.
- Council of Constance, 10, 273.**
- Council of Ten.**—A secret tribunal of Venice, established in 1310, and continuing until 1797. Its members supervised, with great strictness, and even at times with oppression, the internal and external affairs of the republic.
- Counter entry, 13, 115.**
- Counting a Quorum.**—A parliamentary method resorted to by Thomas B. Reed, when speaker of the lower branches of the Fifty-first Congress, to defeat the filibustering practices of the opposition. It resulted in a radical change in the rules governing the deliberations of that body. (See REED, THOMAS BRACKETT.)
- Country boys who have won fame, 8, 107.**
 homes, 1, 9.
- Country-man and his pet jay, French fable, 3, 185.**
- Country or city, the best place to develop one's talents, 8, 97.**
- County.**—In England, where the term county originated, it was used to describe the territory of a count or earl, and from that country the colonies derived the system of county divisions. In 1639 Va., had eight counties and 40 years later, 20. In the South the county government was modeled closely upon that which prevailed in the mother country. The Mass. counties were incorporated in 1643. The only state that did not adopt the term county in its geographical subdivision is La., which is composed of parishes. These are, however, substantially the same as counties.
- Coup d'etat, 12, 241.**
 of 1851, 10, 374.

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- Courage** taught by physical training, 6, 18.
 Training a child in, 2, 251.
 Training in, 2, 459.
- Courbet, Gustave.**—(1819-1877.) A celebrated French painter. He joined the Commune in 1871 and was the leading spirit in the destruction of the Column de Vendôme.
- Court of Claims**, 12, 241.
 Supreme, 12, 242.
- Courtenay, William.**—(1342-1396.) An English prelate; archbishop of Canterbury (1381-96).
- Courtesy**, 1, 63.
 Habit of, 2, 462.
 in children, 1, 67.
 Official, 1, 66.
 Value of, 1, 65.
- Courtois, Jacques**, 9, 263.
- Courts**, 12, 241.
 Prize, 12, 351.
- "Courtship of Miles Standish."**—The title of a poem by Longfellow; published in 1858.
- Cousin** (*kö-zan'*), **Jean.**—(1501-1590.) A painter, engraver, and sculptor. He painted on glass and is celebrated for his miniatures.
- Cousin, Jean**, 9, 260.
- Cousin, Victor.**—(1792-1867.) A French statesman and philosopher.
- Couture, Thomas.**—(1815-1879.) A French painter of distinction.
- Covenanters.**—There were two classes of Covenanters in English history: (1) Those who observed the National Covenant, which was a bond drawn up by the leading Presbyterians in 1638 at Edinburgh. (2) Those who observed the Solemn League and Covenant which the Scotch drew up in 1644 to oppose the attempt of King Charles I. to impose Episcopacy upon the Scotch.
- Covent Garden.**—That quarter of London which in ancient times constituted the convent garden of the monks of St. Peter, Westminster. It lies between the Strand and Longacre.
- Covent Garden Theatre.**—A famous theatre established in London in 1731. After many vicissitudes the old theatre became in 1847 the "Royal Italian Opera House," and was destroyed by fire in 1856.
- Coventry.**—In England, a city in Warwickshire, near Birmingham. It has various manufacturing interests and was once famous for its fine woollens. The legendary scene of the ride of Lady Godiva.
- Coverdale, Miles.**—(1488-1568.) Noted as the first translator of the entire Bible into English.
- Coverley, Sir Roger de.**—Steele and Addison's character in the "Spectator."
- Covington.**—A city in Ky. on the Ohio River, connected with Cincinnati by a great suspension bridge, and noted for its manufacture of iron, tobacco, etc. It narrowly escaped capture by the Confederates under Kirby Smith, in Sept., 1862. Pop. (1900), 42,938.
- Covode Investigation**, 11, 362.
- Cow**, Characteristics of the, 4, 17.
 Points of a good milch, 4, 16.
- Cowan's Ford** (N. C.), **Battle of**, 11, 83.
- Cowbird**, 4, 181.
 Nest of the, 4, 181.
- Cowboy.**—A name given to one who is employed in herding cattle and sheep on the western ranches. They lead a rough, rollicking outdoor life, and are noted for their skill in horsemanship.
- Cowley, Abraham.**—(1618-1667.) An English poet, of much note in his time.
- Cowoda** (N. Mex.), **Battle of**, 11, 362.
- Cowpens** (S. C.), **Battle of**, 11, 83.
- Cowper, William.**—(1731-1800.) A famous English poet.
- Cowper, Letters of**, 1, 87.
- Cowry**, 4, 372.
- Cow's Milk, Composition of**, 5, 236.
- Cowslip**, 5, 58.
- Cox, Kenyon.**—Born at Warren, O., 1856; a distinguished American painter, son of Gen. Jacob D. Cox. After a prolonged residence in Paris where he studied under the leading artists of the time, he established himself in New York, in 1883.
- Cox, Samuel Sullivan**, 12, 243.
- Coyote**, 4, 78.
 Characteristics of the, 4, 78.
 Fur of the, 4, 78.
 Habits of the, 4, 78.
 Home of the, 4, 78.
- Crab**, 4, 367.
 Black, 4, 368.
 Common, 4, 367.
 Characteristics of the, 4, 368.
 Habits of the, 4, 368.
 Fiddler, 4, 368.
 Fresh-water, 4, 369.
 Hermit, 4, 367.
 Habits of the, 4, 367.
 Horseshoe, 4, 320.
 Home of the, 4, 320.
 King, 4, 320.
 Characteristics of the, 4, 320.
 Home of the, 4, 320.
 Mountain, 4, 368.
 Oyster, 4, 368.
 Palm, 4, 368.
 Soft-shelled, 4, 368.
- Crab-eating opossum**, 4, 57.

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- Cracow.**—A city of Austria-Hungary. Contains a famous castle and a cathedral, and possesses much historical interest. Pop. (1890), about 75,000.
- Craddock, Charles Egbert.**—The pseudonym of Miss Mary N. Murfree.
- Cradle of Liberty,** 11, 55.
- Craik, Georgiana Marian** (MRS. A. W. MAY).—(1831-1895.) An English novelist.
- Craik, Mrs.** (DINAH MARIA MULOCK).—(1826-1887.) A noted English novelist; author of "John Halifax, Gentleman," etc.
- Crake, Carolina,** 4, 131.
- Cramer, John Baptist.**—(1771-1858.) A noted pianist and composer. His studies for the piano are widely used.
- Crane,** 4, 222.
 Blue, 4, 223.
 Great white, 4, 222.
 Sand-hill, 4, 222.
 Whooping, 4, 222.
 Eggs of the, 4, 114.
 Nest of the, 4, 114.
- Crane, Ichabod.**—In Irving's "Legend of Sleepy Hollow," a country schoolmaster, of ungainly appearance.
- Crane, Walter.**—Born in 1845. A noted English artist, popularly known by his illustrations for children's books.
- Cranium,** 1, 272.
- Cranmer, Thomas.**—(1489-1556.) Archbishop of Canterbury; tried for heresy and suffered death at the stake.
- Crannon, Battle of,** 10, 207.
- Cranmer, Thomas,** 10, 301.
- Cratægus coccinea,** 4, 420.
 crus-galli, 4, 420.
 mollis, 4, 421.
 oxyacantha, 4, 421.
 tomentosa, 4, 422.
- Crawfish,** 4, 367.
 Habits of the, 4, 367.
- Crawford, Francis Marion.**—Born at Lucca, Italy, in 1854; a well-known American novelist, son of Thomas Crawford, the sculptor. He began his literary career as editor of the "Indian Herald" at Allahabad, India. For several years past, he has resided in Italy. His principal novels are "Mr. Isaacs," "Dr. Claudius," "A Roman Singer," "Zoroaster," "Saracinesca," "With the Immortals," "Khaled," "The Witch of Prague," "The Three Fates," etc.
- Crawford, John Martin,** translator of the *Kalevala*, 3, 404.
- Crawford, Thomas,** 9, 412.
- Crawford, William Harrison,** 11, 363.
- Crayons for children,** 2, 422.
- Crayon portraiture,** an occupation for women, 7, 407.
- Cream tartar,** 5, 233.
- Creatine** (Greek, *kreas*, flesh).—A discovery made in 1835 by Chevreul, a French chemist, and 12 years later called attention to by Liebig, the German chemist, in his "Researches on the Chemistry of Food." It is a white, crystalline, nitrogeous substance, resembling sugar of lead, and found in the fiber of muscles, and hence in the extract of meat. It occurs also in blood and in the substance of the brain. Liebig states that the flesh of hens furnish creatine abundantly, to the extent of 0.32 per cent., while ox and horse flesh yield, on an average, 0.07 per cent. To extract it from meat, the latter is mashed and digested for a time with cold water; the clear aqueous extract thus obtained is boiled to coagulate albumen, filtered, mixed with baryta water, again filtered, and evaporated to a syrup, when at length creatine crystallizes out.
- Creation.**—A term used to signify the act of bringing the universe of this world into existence. It implies the forming by the Deity, a Being of Supreme Power, of worlds out of nothing, and causing them to exist, and move in their orbits in vast space. It is the statement with which our Bibles open (Gen. I., 1.): "In the beginning God *created* the heaven and the earth." Creation has been the theme which has inspired many men, eminent as poets, painters, and musical composers, in the attempt to interpret it to the world. The poet Milton has dealt with the subject in his great epic of "Paradise Lost"; it is the subject of frescoes in the Sistine chapel, at Rome, by Michelangelo, and in the Vatican by Guilio Romano, after a design by Raphael; and it is the subject of a famous oratorio by Haydn, produced at Vienna at 1798. As to the date, era, or epoch of Creation we know nothing definitely. Theologians and modern scientists have of recent years been much exercised over this point and have reached no harmony, the former assigning a date varying from about 4,000 to 7,000 years B. C., while the latter (who include eminent geologists and physicists) from calculations as to the successive deposits on the earth's crust conclude that over 50 million years must have elapsed since the globe began to spin round on its orbit, first as a molten, moonless, and waterless planet. The Scriptures, it should be added, do not give a *scientific* account of the origin or work of creation,

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though the Mosaic order, science admits, has no doubt been followed.

Creation described in the Koran, **3**, 391.

Arabic version of the, **3**, 215.

Norse version of the, **10**, 118.

Hindu version of the, **10**, 6.

Crèche (*krāsh*).—A public nursery for the taking care, for the day, of the children of poor women, who go out to work, either as charwomen or in the factories of France. There are many such homes in Paris and other French cities, while in this country and in England somewhat similar institutions have come into existence. In London, there are two estimable organizations, known as the Children's Fresh-air Mission, and the Children's Country Holidays Fund, where, poor and sickly children are sought out and taken to the country for two or more weeks for change of air and to be furnished with nutritious, wholesome diet. In the hot summer time, they are also given holidays in the country, being boarded with country cottagers, and the expense is borne by the funds of the societies and from the donations of the wealthy.

Crécy, or Cressy.—A village in northern France, 30 miles N. E. of Amiens, in the department of Somme, where in August, 1346, Edward III. of England, with about 35,000 of an army, defeated about 80,000 French, including the flower of French chivalry. The French, who were under Philip VI. and the Count of Alençon, it is estimated, lost 30,000 men in the action, together with the blind king of Bohemia, who was one of their allies. In the battle, the English king's son, the Black Prince, won his spurs, and ten years later gained the battle of Poitiers against 60,000 French under King John II., known as "*Le Bon*" (the good).

Crécy, Battle of, **10**, 266.

Credit, **13**, 39.

as Capital, by John Greene, **13**, 110.

Letter of, **13**, 145.

Mobilier, **12**, 243.

Structure of, **13**, 340.

Use of the letter of, **13**, 243.

Creditor, Preferred, **13**, 177.

Creede, Nicholas C., **13**, 446.

Creedmoor.—A village of Long Island, N. Y. The National Rifle Association has its rifle-range here.

Creek Indians.—Of Muskhogean stock. When most numerous and powerful, they occupied Ala., Ga., and much of Fla. Incited by the Spaniards, the Yamasi Creeks repeatedly attacked the white settlers of other nationalities early in the 18th century, and the tribe generally sided with the British in the Revolution-

ary War. In 1792, they broke a treaty of peace which they had signed only two years before. Between 1802 and 1805, they ceded much of their lands to the whites. Aug. 30, 1813, when they were again allies of the British, they attacked Fort Mims and slew 400 people. In 1814, they were thoroughly conquered by Gen. Jackson, after which they ceded most of their lands to the U. S. The Seminoles, a branch of the Creeks, warred upon the U. S. from 1835 to 1843. The Creeks now dwell in the Ind. Ter., where they have made some advance in the arts of civilization. They number about 15,000.

Creek Indian War, **11**, 225.

Creeper, black-and-white, **4**, 185.

Creeper for children, **2**, 83.

Creeping, Clothes suitable for, **2**, 83.

Danger of the fire-place, **2**, 84.

of the lamp, **2**, 84.

of the stairs, **2**, 84.

freely, Child encouraged in, **2**, 83.

period a trying one to mother, **2**, 82.

Helping a, child, **2**, 81.

Cremation.—To-day, in our crowded cities especially, earth-burial is a serious menace to health, and intramural burial is a violation of sanitary laws, which, but for our ignorance or prejudice, we should never suffer to take place. If one reflects at all on the subject, nothing could well be more gruesome, when life has departed, than that the body should slowly putrefy in a coffin, tricked out with our poor posthumous vanities, rather than be returned as speedily as possible to the original elements of the dust. The Ancients in this respect were wiser than we, in immolating the human frame when life had gone from it, or like the Egyptians embalming it and so keeping it from the corruption of the grave. Modern science has, here and there, striven to recall the world of to-day to a change in our burial customs which sanitary precepts enjoin upon us. But public sentiment and ultra-conservatism still force the world to adhere, in the main, to old ways of disposing of the dead. Cremation or incineration, is in this country as well as abroad (especially in Paris), becoming more general, however; in New York, San Francisco, Boston, Philadelphia, and Chicago, it is now considerably practised. In 1899, 1,679 bodies of decedents were thus disposed of in the United States, the average cost of the process being \$35 for adults and \$20 for children under 12 years of age. Cities, it is estimated, could cremate paupers and criminals at a cost of \$1.00 each, against \$3.00 merely to dig a grave.

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- Cremona.**—(1) A province in Lombardy, Italy.
(2) The capital of the province of Cremona; noted for its manufacture of violins, and silks.
- Creole case**, 11, 363.
- Creole State.**—Louisiana.
- Creosote.**—Used in medicine as an antiseptic, and by many as a remedy for toothache. It is obtained by the distillation of wood-tar, generally that of beechwood. When pure, the oil is clear, but is more frequently of a yellow or brown color, the result of impurity or of exposure, and it has a burning smoky taste. It is a good deodorizer, and is used in the prevention of putrefaction. Coal-tar creosote is another somewhat similar preparation, and resembles wood-tar oil alike in its composition and in its properties.
- Crescent City.**—A popular name for the city of New Orleans, La.
- Cress, Indian**, 5, 69.
- Crested fowl**, 4, 106.
peacock, 4, 202.
- Cretaceous rocks**, 5, 465.
- Crete.**—An island in the Mediterranean, south-east of Greece, under Turkish government.
- Crete captured by the Turks**, 10, 377.
- Creve-cœur fowl**, 4, 107.
- Crichton, James** (THE ADMIRABLE CRICHTON).—(1560-1583.) A Scottish scholar and adventurer.
- Cricket**, 6, 238.
- Crimea** (*Chersonesus Taurica*).—A peninsula projecting into the Black Sea in southern Russia, and connected with the latter by the Isthmus of Perekop. The place is interesting as the scene of important events during the war of 1854-55 between Russia and the allied armies of England, France, Turkey, and Sardinia. The war was occasioned by Russian encroachments upon Turkey and her demand for a protectorate over the Greek subjects of the sultan. The real motive of Russia was the dismemberment of Turkey, and to this, in the interest of the security of Europe, the Allies would not consent, and so the war was precipitated. Russia was defeated in the war, and her fleet was debarred from the Black Sea.
- Crimean War.**—(1853-56.) A war between Russia and the allied forces of Great Britain, France, Turkey, and Sardinia. The war was ended by the Treaty of Paris, 1856.
- Crimean War, Sardinia aids in the**, 11, 3.
- Crinoids**, 5, 463.
- Cripplegate.**—An old gate of London, said to have been built, originally, by King Alfred, 886 A.D. Destroyed in 1760.
- Crispi.**—(1819-1901.) A distinguished Italian statesman.
- Criss Kingle.**—The Christ Child.
- "Cristobal Colon," The**, 12, 243.
- Crith**, 13, 160.
- Criticism of Children, Harsh**, 2, 194.
- Crittenden, John Jordan**, 11, 225, 363.
- Crittenden, Thomas Leonidas**, 11, 476.
- Croatia.**—A division of Bosnia; the latter a territory of southeastern Europe.
- Crockett, David**, 11, 364.
- Crockett, S. R.** (1860-), was a Free Church minister at Penicuik, Scotland, when "The Stickit Minister" (1893) made him famous; has since written more than a dozen novels.
- Crocodile**, 4, 243, 257.
Capturing the, 4, 258.
Characteristics of the, 4, 257.
Eggs of the, 4, 258.
Food of the, 4, 258.
Geographical range of the, 4, 257.
Habits of the, 4, 258.
Nile, 4, 257.
Worshiped by the Egyptians, 4, 259.
- Crocodile bird**, 4, 258.
- Crocus**, 5, 58.
- Crœsus.**—A king of Lydia, who succeeded to the throne, 560 B.C. Through his conquests, he acquired great power and riches.
- Crœsus**, 10, 193.
- Crofters and Cottars.**—A term in use in Scotland to designate the tenant of a small holding of tillable land, the rental value of which does not exceed \$150 per year. Frequently, these holdings are hillside pastures, where a little farming is done and live stock raised. The cottar is generally lower in the economic and social scale than the crofter, being little above, if in any degree, what are called squatters in this country. The term means cottager, of the peasant and farm-laboring class—survivors of the primitive custom of land tenure once common in the highlands of Scotland.
- Croker, Richard**, 12, 244.
- Croly**, "Jennie June," on "If I Were a Girl Again," 1, 254.
- Crome, John.**—(1768-1821.) A distinguished English landscape painter.
- Crome, John**, 9, 281.
- Crome, Old**, 9, 281.
- Cromer, Evelyn Baring**, Viscount, Cairo Egypt (1840-), the maker of modern Egypt, a prince of diplomatists, a heaven-born administrator; has been officially connected with Egyptian affairs since 1877; "The master of us all," said Lord Kitchener after the conquest of the Sudan.
- Cromer, Lord**, in Egypt, 11, 18.

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Cromwell, Oliver, Life of, 10, 319.

referred to, 14, 34.

Cromwell, Thomas, Earl of Essex.—(1485–1540.) A noted English statesman; beheaded on a charge of treason.

Cromwell, Thomas, 10, 301.

Cronje, Piet.—Famous in the first Transvaal War, cornered Jameson at Doornkop, defeated Methuen at Magersfontein, surrendered to Roberts at Paardeberg, and was sent to St. Helena; before this he had been a member of the Transvaal Executive Council; a fierce fighter and resourceful commander.

Cronstadt, or Kronstadt.—(1) The capital of the county of Cronstadt in Hungary. (2) A seaport on the Gulf of Finland; founded by Peter the Great, 1710, and in the government of St. Petersburg.

Crook, George, 11, 476.

Crookes, Sir William, F. R. S.—7, Kensington Park Gardens, W., London (1833–), an eminent chemist and electrician, his address to the British Association (1898), dealing with psychical research and the wheat problem, started a lively and prolonged discussion.

Cropsey, Jasper Francis.—Born at Rossville, N. Y., 1823. A noted landscape painter. He was a pupil of Edward Maury and became a member of the National Academy in 1851.

Croquet, 6, 247.

Crosby, Howard.—Born at New York, 1826; died there in 1891. An American Presbyterian clergyman and classical scholar. In 1870 he became chancellor of the University of New York and a member of the American committee for the revision of the New Testament. He was also president of the Society for the Prevention of Crime in 1877.

Crosby, Pierce, 11, 477.

Cross (from the Latin *crux*, a cross).—The chief Christian symbol since the crucifixion of Christ, and anciently used in the gibbeting or hanging of slaves, criminals, and other malefactors undergoing the punishment of or consigned to death. The forms of these gibbets or crosses were various; ordinarily they consisted of two pieces of timber placed transversely upon each other as a +, or +, with the horizontal piece a little below the upper end of the upright, or thus ×, known as saltire-wise, as in the blazoning of a shield in heraldry. The latter cross is known as the cross of the martyr St. Andrew, the patron saint of Scotland. The first form above shown is the Latin or Roman cross, the *crux immissa* or *crux ordinaria*. The Greek, Egyptian, or St. Anthony's cross is designed thus τ, the cross on which the apostle Philip is said to have

suffered death. The Papal or triple cross is a double one, thus †. A cardinal's cross or the Patriarch's in the Greek Church is a double Greek cross, thus ⊕. The Maltese, akin to the *Cross pattée*, is the Greek cross narrowing towards the centre, with two points at each extremity, thus ⊞.

Cross-fertilization of a flower, 4, 398.

Cross-Keys (Va.), Battle of, 11, 477.

Cross, St. Andrews, 13, 91.

Cross, Mrs. (Mary Ann Evans) pseudonym, **George Eliot**.—(1819–1880.) A celebrated English novelist.

Croton.—A river in southeastern N. Y., from which New York City obtains its chief water supply through the Croton aqueduct.

Croup, Treatment of, 1, 325.

Crow blackbird, 4, 176.

Carrion, 4, 138.

Common, 4, 149.

Eggs of the, 4, 115.

Habits of the, 4, 149.

Nest of the, 4, 115.

rookeries, 4, 149.

Taming the, 4, 150.

Crow, The, Polish fairy tale, 3, 46.

Crown, Austrian, 13, 154.

"Crown of Thorns and Cross of Gold," 12, 244.

Crown, Oration on the.—A celebrated oration of Demosthenes.

Crown Point (N. Y.), Capture of, 11, 83.

Cruelty in children, Cure for, 2, 264.

Cause of, 2, 264.

Cruikshank, George.—(1792–1878.) A noted English caricaturist. The first illustrator of Dickens's works.

Crusades, 10, 257.

Children's, 10, 257.

enrich Italy, 10, 277.

Crustacea, 4, 320.

Crustaceans, 4, 364.

Characteristics of, 4, 364.

Home of the, 4, 365.

Food of the, 4, 365.

Varieties of, 4, 365.

Cry, a symptom of disease, 1, 314.

Crying a sign of discomfort, 2, 62.

Cryolite (Greek, *κρύος*, frost, icy cold, + *-lite*).—A double fluoride of sodium and aluminium, found in Greenland, in white clearable masses, and important as a source of the metal aluminium. It is used in the manufacture of soda; when fused it can be made into tableware, somewhat resembling porcelain, and known as hot-cast porcelain.

Cryolite, 5, 189, 440.

Crystal forms, To model, 7, 257.

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Crystal Palace.—In Hyde Park, London. A building constructed of iron and glass, for the great exhibition of 1851. The materials of the building were used to rebuild, in 1852, the present Crystal Palace, near Sydenham, in Kent.

Crystalloids, 4, 392.

Cuba.—The largest island of the West Indies, with an area of 42,000 sq. miles, and a coast line, including indentations, of nearly 7,000 miles. Cuba has a soil that for fertility is hardly exceeded by that of any other part of the world. The surface is swampy near the sea, particularly along the south side, with high tablelands and mountains in the interior. Much of Cuba is within the tropics, but, in consequence of the varying altitudes, it has, in one part or another, all the climates of the temperate zone. The year is commonly divided into a hot, wet season and a cool, dry season, the latter extending from November to May. There are 20,000,000 acres of untilled land in Cuba, and of these 12,000,000 are covered with virgin forest, in which the palm tree predominates. The main crops, exclusive of fruits, are sugar, coffee, tobacco, cocoa, cotton, sarsaparilla, vanilla, copal, china root, cassia, palma christi, mustard, pepper, ginger, licorice, balsam, and India rubber. There are minerals, but, with the exception of iron and copper, they have not of late years been mined in paying quantities. Cigar factories are the only important manufacturing plants. There are about 1,100 miles of railroad, exclusive of suburban roads, and it is, to a great extent, in poor condition. The telegraph system, when Spain ruled the island, was also most unsatisfactory. Under the same régime the Cuban debt rose at one time to \$1,250,000,000. The first Spanish settlement in Cuba was made in 1514 at Santiago, which was for some time the capital. Havana was founded in 1519. It was destroyed by privateers in 1538, but was speedily rebuilt and made the capital in 1550. There were repeated revolts, some local and others widespread, against Spanish authority during the second half of the 18th century and through the 19th. One rising broke out in 1827, another in 1844, a third in 1851, a fourth in 1868, and the last, which was made successful by the intervention of the U. S. in 1894. In 1848, President Polk urged the purchase of the island for \$100,000,000, but the proposition found no favor among the Spaniards. In 1854, the claim was advanced in the Ostend Manifesto that should Spain refuse to sell, the U. S. might properly annex the island, and revolutionists took advantage of this contention to prepare for an insurrection. Before the plan

was matured, however, the Spanish authorities, apprised of the conspiracy, arrested and executed the leaders. The insurrection of longest duration was that which began in 1868 and lasted for ten years. During this revolt the Spaniards captured the American ship "Virginus," executed most of her crew and passengers, and almost precipitated a war with the U. S. (See "VIRGINIUS.") The story of the conflict that ended in the liberation of the island from Spain, in 1898, is told in this volume under the caption SPANISH-AMERICAN WAR (which see). Cuba was discovered by Columbus, Oct. 28, 1492, and bore in succession three names—Juana, Fernandina, and Ave Maria, before its native designation, Cuba, was finally determined upon. All through the period of its possession by Spain, the statesman of that country had apparently little other use for it than as a means to enrich themselves and the influential families of Spain. Its population in 1894 was estimated at 1,725,000. If well governed, cultivated, and developed, it would support millions. Under the provisional government of the island by the U. S., the school attendance has increased largely, and, through improved sanitary arrangements, the ravages of yellow fever have been reduced.

The provinces of Cuba are Havana, Matanzas, Santiago, Santa Clara, Puerto Principe, and Pinas del Rio, which, with the city of Havana, the capital (pop., 235,981), have, by the late census, a total population of 1,572,797. The election returned T. Estrada Palma as president of Cuba, though the United States troops remained in military occupation of island. In 1900, the exports of Cuba for the year amounted to \$42,228,346 and the imports to \$71,681,187. In 1900 the value of the tobacco exports to this country was close upon \$10,000,000. By act of Congress, freedom and self-government were granted to Cuba. The act went into effect on May 20, 1902.

Upon the formal withdrawal of the United States, Governor-General Wood was succeeded by President Palma. The Cuban Congress remained in almost continuous session from May 20, 1902 until June 18, 1903. One of the final acts of the Senate was the ratification of a postal treaty with the United States. By a previous treaty the United States was given coaling-stations on the Isle of Pines, the United States to pay for the same at the rate of \$2,000 a year. The permanent treaty, incorporating the Platt amendment, was ratified by Cuba on May 22, 1903. The first year of Cuban independence showed a good financial condition, the surplus in the treasury at that time being \$3,522,681.

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In 1906 the discontent that had been growing against the government took the form of open rebellion against President Palma and the rebels resorted to arms. Several engagements took place and in September President Palma made a desperate appeal to the United States to send men and vessels to help him to preserve order. He even intimated that a massacre of the citizens of Havana might be looked for in the event of a refusal of the United States to protect the city. The United States did not comply with the request as it did not desire to interfere until all of the means which the President of Cuba had should be exhausted. Finally it became necessary for the United States to send Secretary of War, Taft to the island to take control. He met both sides and President Palma resigned. The rebels were satisfied to disarm and the United States took formal charge of the affairs of Cuba as directed by the terms of the treaty in case of the failure or inability of Cuba to manage her own affairs. Charles E. Magoon, from the Panama Canal Commission, was then appointed Governor of the island on behalf of the United States. He has faced a situation of the utmost gravity and one of the most serious that has confronted the United States in all of her extension career.

Cuba, Spain directed to evacuate, 11, 29.

Cube, To model a, 7, 245.

Working drawing of a, 7, 288.

Cubic measure, 13, 148.

Cubit, 13, 161.

Cuckoo, 4, 180.

Black-billed, 4, 180.

Food of the, 4, 181.

Yellow-billed, 4, 180.

Cucumber, 5, 58.

Cucumis melo, 5, 73.

Cucurbita maxima, 5, 73.

pepo, 5, 73.

Cuença, Battle of, 10, 244.

Culex, 4, 257.

fasciatus, 4, 355, 357.

Culloden (*kul-lō'-den*) **Moor**.—A moor five miles east of Inverness, in the north of Scotland, where a battle occurred, Apr. 27, 1746, between the Royalists and the Highlanders under Charles Edward the Young Pretender, in which the latter were defeated.

Cullom, Shelby Moore, 12, 244.

Cullym, Abraham, maker of stoneware, 1, 220.

Culpeper, Lord, 11, 43.

Culture essential to good conversation, 1, 78.

Cumberland.—A city of Md., situated on the Potomac River, with large coal deposits in its vicinity. Iron and glass are among its manufactures. Pop. (1900), 17,128.

Cumberland, Army of the, 11, 477.

Cumberland Gap, 11, 477.

Cumberland Mountains.—A part of the Appalachian system separating Ky. from Va. Rich mineral deposits abound in the district.

Cumberland River.—A stream which rises in the Cumberland Mountains, flows west and north, and empties into the Ohio. It is navigable, except at very low water, from Nashville, Tenn., to its mouth.

Cummins, Maria Susanna.—Born at Salem, Mass., 1827; died at Boston, 1866. Author of "The Lamplighter," a novel which was very widely popular.

Cunard, Sir Samuel, 12, 244.

Cunaxa.—A place near the Euphrates about 75 miles from Babylon, noted for the battle between Artaxerxes and Cyrus the Younger (401 B. C.). Cyrus was defeated and slain.

Cunaxa, Battle of, 10, 189.

Cuneiform bone, 1, 274.

of the ankle, 1, 274.

Cupid, 10, 94.

Cupressus thyoides, 4, 457.

Cupric compounds, 5, 211.

Cuprous compounds, 5, 211.

Curaçoa.—An island and Dutch possession lying off the Venezuelan coast in the Caribbean Sea. Its area is 210 square miles and has a population of 30,000. The colony embraces several other islands, including Bonaire, Aruba, part of St. Martin, etc., the total area of which, including Curaçoa is 403 sq. miles. Its affairs are administered for the Netherlands by a Governor and local council. It produces tobacco, maize, figs, cocoanuts, citrons, oranges, etc., and exports cattle, sheep, goats, salt, etc. Here is made the well-known liqueur or sweetened spirit, known as curaçoa.

Curfew, 13, 95.

Curius Dentatus, 10, 214.

Curious Impertinent, Turkish fable, 3, 179.

Curlew sandpiper, 4, 133.

Curling, 6, 291.

Curran, John Philpot.—(1750-1817.) An Irish orator, was associated with Grattan and defended the prisoners in the prosecutions during the insurrection of 1798.

Curran, J. P., 14, 166.

Currants, 5, 58.

Currency, 7, 462.

Postage, 13, 164.

should not be carried by travelers, 13, 241.

Currier Bell.—See BRONTË, CHARLOTTE.

Curry, S. S., on "Expression as a Means of Developing Character," 8, 109.

Curtains, 1, 36.

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Indian silk, 1, 36.

Irish point-lace, 1, 35.

Madras, 1, 36.

Nottingham lace, 1, 35.

Silk, 1, 35.

Swiss lace, 1, 35.

To wash, 1, 28.

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- Curtis, George Ticknor.**—Born at Watertown, Mass., 1812; died at New York, 1894. A noted lawyer and legal writer. He wrote "The Law of Patents," "Constitutional History of the United States," "Life of Daniel Webster," etc.
- Curtis, George William.**—Born at Providence, R. I., 1824; died on Staten Island, N. Y., 1892. A prolific American journalist, distinguished as an orator, publicist, and author. He was a member of the Brook Farm Association for 18 months; after traveling abroad some years he became editor of "Harper's Weekly" in 1863. He took great interest in civil service reform and was appointed by President Grant one of the commissioners to draw up rules for the regulation of the civil service. He was author of "Nile Notes of a Howadji," "Lotus-Eating," "Potiphar Papers," "Trumps," "Prue and I."
- Curule ediles, 10, 210.**
- Curzon of Kedleston, Baron.**—Government House, Calcutta (1860-). Lord Salisbury's Under-Sec. for Foreign Affairs 1895-98, filled the post with great ability and energy; has succeeded beyond expectation as Viceroy of India; a much traveled man, with a gift of rhetoric; married to a beautiful American — Miss Leiter, of Washington, D. C. In 1906, through friction with General Lord Kitchener he resigned his position and returned to England. Later in the same year Lady Curzon died.
- Cushing, Caleb, 11, 364.**
- Cushing, William Barker, 11, 478.**
- Cushman, Charlotte Saunders.**—(1816-1876.) An American actress, who had a very successful career both here and abroad. She appeared with Macready 1842-44. Her strongest characters were "Romeo," "Wolsey," "Hamlet," "Claude Melnotte," "Meg Merrilies," and "Nancy Sikes."
- Cushman, Charlotte, 14, 24.**
- Cushman, Robert.**—Born in England about 1580; died there, 1625. An English merchant who came to America and was one of the founders of the Plymouth Colony.
- Cushman, Wilbur E.,** on "Baking as a Business and as a Trade," 13, 391.
- Custard-apple, 4, 475.**
- Custer, Mrs. Elizabeth B.,** on "If I Were a Girl Again," 1, 254.
- Custer, George Armstrong, 11, 478.**
- Custis, George Washington Parke, 11, 225.**
- Custom duties, 13, 247.**
- Custoza, Battle of, 11, 2.**
- Cuthbert.**—A noted English monk who lived in the 7th century. He was bishop of Lindisfarne.
- Cuttlefish, 4, 370, 371.**
- Cuvier, Baron.**—(1769-1832.) A famous French naturalist who was the founder of the science of comparative anatomy.
- Cuvier's brain, Weight of, 1, 283.**
- Cuyahoga (*kī-ä-hōg-ä*).**—A river of northern Ohio, which flows into Lake Erie at Cleveland after a course of about 90 miles.
- Cuyler, Dr., on persistence, 8, 258.**
- Cuyp, Aelbert, 9, 315.**
- Cuzco.**—A district in Peru. The capital of the district bears the same name, and is very interesting on account of the remains of the Temple of the Sun and other relics of the Incas. Pop. of the city about 20,000.
- Cuzco, Pizarro enters, 11, 39.**
- Cyanide defined, 5, 183.**
- Cyaxeres, 10, 186.**
- Cyaxeres II., 10, 184.**
- Cyclades (*sik' la-dēs*).**—A group of islands in the Ægean Sea, belonging to Greece. They are 12 in number, and take their name from the Greek word for "a circle," on account of their arrangement. Hermopolis is the capital. The total population is about 136,000.
- Cyclops (*sī-klops*).**—A mythological race of one-eyed giants.
- Cyclops, 3, 378; 10, 91.**
- Cyclone insurance, 13, 187.**
- Cydicpe, 10, 89.**
- Cylinder, To model a, 7, 254.**
To find the solid contents of a, 13, 152.
surface of a, 13, 153.
- Cyncephalæ, Battle of, 10, 217.**
- Cyprus.**—A large island in the eastern portion of the Mediterranean, and south of Asia Minor. The government is administered by England, though the island nominally belongs to Turkey. It is regarded as an important base for the protection of the Suez Canal.
- Cyprus acquired by Great Britain, 11, 12.**
taken by the Turks, 10, 307.
- Cyrene (*sī-rē'nē*).**—In ancient times this was the chief city of Cyrenaica, a district in Africa, and was situated about ten miles from the Mediterranean.
- Cyrus, King of Persia, 10, 184.**
Life of, 10, 186.
- Cytisus laburnum, 5, 2.**
- Czar of Russia, Nicholas II., (1868-)** is the son of Alexander III., his mother being sister to Queen Alexandra; succeeded to the throne Nov. 1, 1894; has shown himself a ruler of humane tendencies, favorable to religious toleration, and not disregardful of liberty in general, although the suppression of the little Finnish nation has been carried out during his reign; on Aug. 24, 1898, the Czar issued his

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famous Peace Manifesto to the Powers, proposing a conference for the preservation of international peace by disarmament. The Czar was married Nov. 26, 1892, to Princess Alix of Hesse-Darmstadt, daughter of the late Princess Alice of England.

Czars.—The rulers of Russia. The word is a corruption of Cæsar, and it is sometimes written Tsar. The title was first assumed by Ivan IV. "The Terrible" in 1547. Those of the rulers of Russia who have borne this title are: Ivan IV., 1533-84; Feodor I., 1584-98; Boris, 1598-1605; Basil, 1606-13; Michael Romanoff, 1613-45; Alexis, 1645-76; Feodor II., 1676-82; Ivan V. and Peter I., 1682-89; Peter I., 1689-1725; Catherine I., 1725-27; Peter II., 1727-

30; Anne, 1730-40; Ivan VI., 1740-41; Elizabeth, 1741-62; Peter III., 1762; Catherine II., 1762-96; Paul I., 1796-1801; Alexander I., 1801-25; Nicholas I., 1825-55; Alexander II., 1855-81; Alexander III., 1881-94; Nicholas II., 1894.

Czechs (*chechs* or *cheks*).—A Slavonic race including the Bohemians or Czechs proper the Slovaks and the Moravians. There are about 2,000,000, and they live in Bohemia, Moravia, and Hungary.

Czerny (*cher' nē*).—(1) **George**, or **Kara George** (Black George) (1766-1817.) The leader in the rising of the Servians against the Turks in 1804. (2) **Karl** (1791-1857).—An Austrian composer and pianist.

D

Dacia.—A Roman province formed by the Emperor Dacian (101). It comprised all of modern Rumania and some of the adjacent countries. The Romans abandoned it during the reign of Aurelian (270-275).

Dactyl.—In prosody, a foot consisting of one long and two short syllables, or of one accented and two unaccented syllables; as, mer'-rily.

Dactyl, 8, 406.

Dædalus.—In Grecian mythology the personification of trades and arts. He was confined in the famous labyrinth at Crete. He and his son, Icarus, escaped on wings of wax which Dædalus had made. Icarus flew too near to the sun, which melted the wax of his wings and he fell into the sea, named Icarian from this event.

Dædalus, 10, 109.

Daffodils, 5, 67.

Daghestan rugs, 1, 34.

Dago.—One born of Spanish parents. The name was so applied, originally in Louisiana. Now it is a term extended to Italian, Portuguese, and Spaniards.

Daguerre (*dä-gär'*), **Louis Jacques Mandé.**—(1789-1851.) A French painter and the inventor of the daguerreotype process of photography, in 1839.

Dahl, Michael.—(1656-1743.) A Swedish portrait-painter, who settled in London.

Dahlgren, John Adolf, 11, 478.

Dahlia, 5, 59.

Dahomey.—A negro kingdom in West Africa, near the slave coast. Capital, Abomey. The

area is 60,000 sq. miles, and the population is estimated at a million.

Dairy cattle, 4, 16.

Daisy, Origin of name, 1, 199.

Daisy Fields Home, 14, 375.

Daityas, 10, 11.

Dale, Richard, 11, 83, 110.

Dale, Sir Thomas, 11, 42.

Dallas.—(1) A small town in northwestern Ga., the scene of spirited engagements during the Atlanta campaign in 1864, between the Federals under Sherman and the Confederates under Johnston. (2) A city in northern Texas, on the Trinity River, noted for its rapid advance in manufactures, etc. Pop. (1900), 42,638.

Dallas, George M., 11, 311, 364.

Dalles, The.—A city in Ore., near which are the Dalles or rapids and cataracts of the Columbia River. Pop. (1900), 3,542.

Dalmatia.—A kingdom in Austria-Hungary, bordering on the Adriatic Sea. Zara is the capital. The area is 4,940 sq. miles. The population is about 530,000.

Dalmatian dog, 4, 19.

powder, 5, 11.

Dalou, 9, 402.

Dalton, John Call.—Born at Chelmsford, Mass., 1825; died at New York, 1889. An American physiologist, professor of physiology in the College of Physicians and Surgeons in New York City, and author of "Treatise on Human Physiology," etc.

Dalton's law, 5, 253.

Daly, Marcus, 13, 446.

Damages, 13, 116.

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- Damaraland.**—A district in German Southwest Africa. It was annexed by Germany in 1884. The English occupy Wollisch Bay in this district.
- Damascus** —Once the capital of Syria. It is situated on the edge of the desert in Coele-Syria. Pop., about 150,000. It has been intimately connected with Biblical history from the time of Abraham.
- Damien de Veuster, Joseph, 12, 244.**
- Damietta.** — (1) One of the branches — the eastern — of the Nile River. It, with the Rosetta, forms the Delta of the Nile. (2) A city in lower Egypt between the Damietta branch and Menzaleh. Pop. (1897), 31,515.
- Damocles** (*dam'-ō-klēz*), a Syracusan, who extolled the prosperity of Dionysius the Elder, was invited by the tyrant to a feast. On looking up he saw a sword suspended above his head by a single horse-hair. He was obliged to sit thus through the banquet in constant terror. The term "sword of Damocles" is used to signify impending danger.
- Damon.**—A Syracusan follower of Pythagoras, famous for his friendship with Pythias. In the first half of the 4th century Pythias plotted against the life of the tyrant Dionysius I. He was condemned to die; but wishing to put his affairs in order, received permission to do so, when Damon offered himself as a substitute and was willing to die in his stead if he did not return on the stated day. At the last moment Pythias returned and Dionysius was so impressed by the friendship that Pythias was pardoned.
- Damrosch, Leopold.**—Born in Prussia, 1832; died at New York, 1885. Distinguished as a musical composer and violinist. By his efforts, the Metropolitan Opera House, New York, was established, of which he became the director.
- Dams, Beaver, 4, 51.**
- Dana, Charles Anderson.**—Born at Hinsdale, N. H., 1819; died near Glen Cove, L. I., 1897. Noted as one of the leaders in the Brook Farm Association in 1842. He was assistant secretary of war (1863-64), and became editor of the New York "Sun" in 1868. He had been for fifteen years associated with Horace Greeley on the New York "Tribune." He compiled the "Household Book of Poetry," and edited the "American Cylopædia" in connection with Ripley. He was a vigorous political writer and made the "Sun" a journal of great influence.
- Dana, James Dwight.**—Born at Utica, N. Y., 1813; died at New Haven, Conn., 1895. A noted professor of geology and mineralogy at Yale College from 1845. After acting as mathematical instructor of midshipmen in the U. S. navy (1833-35), he accompanied the Wilkes exploring expedition (1838-42). Besides interesting and valuable reports on geology, corals, and crustaceans, he wrote "System of Mineralogy," "Manual of Geology," "Corals and Coral Islands," "Characteristics of Volcanoes."
- Dana, Mt.**—(13,277 ft.) In the Sierra Nevada range.
- Dana, Richard, 11, 56.**
- Dana, Richard Henry.**—Born at Cambridge, Mass., 1815; died at Rome, Italy, 1882. Son of R. H. Dana; distinguished as a jurist, politician, and author. After a voyage on the Pacific for the restoration of his health, he published "Two Years before the Mast," "The Seamen's Friend," and Wheaton's "Elements of International Law." He was one of the founders of the Free-Soil party.
- Danai.**—The Argives or early inhabitants of Argos; used by Homer as a name for the Greeks generally.
- Danaides, 10, 103.**
- Danaus, 10, 103.**
- Danbury.**—A city in Conn., noted for its manufacture of hats. It was burned by the British in 1777. Pop. (1900), 16,537.
- Dancing, Jean Paul Richter on children, 2, 132.**
- Dances, 1, 53.**
- Dandelion, 5, 35.**
Symbolism of, 1, 199.
- Dandy Dinmont terrier, 4, 21.**
- Danes invade England, 10, 246.**
- Danger in a game, Value of, 6, 20.**
- Daniel, 10, 184.**
- Daniels, Judge Charles, 13, 259.**
- Danish dog, 4, 19.**
fairy tales, 3, 142.
weights, 13, 220.
- Danites.**—A secret order within the Mormon Church, the members of which bind themselves by solemn pledge to uphold the authorities of the church in whatever they may do. It was established by Brigham Young, who was at its head until his death. The Danites, it is alleged had much to do with the persecution of "Gentiles" who emigrated to Utah and the adjacent regions occupied by Mormons. It is the popular belief that the order was responsible for the massacre of 120 anti-Mormon emigrants at Mountain Meadows, Utah, in 1857.
- Dannat, William T.**—Born at New York in 1853. Noted as a figure painter. He was a student under the famous artist Munkacsy, and gained the third-class medal at Paris in 1883.
- Dannecker, Johann Heinrich, 9, 403**

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- Dante** (*dan-tê*), **Alighieri**.—(1265-1321.) An Italian poet, born at Florence and died at Ravenna. His romantic passion for Beatrice Portinari, begun when she was eight years old and he was nine, inspired him in his work through life. His chief work is the "Divina Commedia."
- Dante**, 14, 95.
- Danton, Georges Jacques**.—(1759-1794.) A noted French revolutionist. Guillotined at Paris.
- Danton**, 10, 344.
- "**Dan Tucker**."—The title of a negro song once popular in the United States.
- Dantzic**.—In Prussia; a seaport and capital of west Prussia; one of the most important ports of Germany and the second grain center in Europe. Population (1890), about 120,000.
- Danube**.—The second river in size in Europe. Length 1,770 miles.
- Danusha**, 10, 10.
- Danvers**.—A town in Mass., seat of the state insane asylum. Pop. (1900), 8,542.
- Danville**.—(1) A city in Ill., on the Vermilion River, a railway and coal mining center. Pop. (1900), 16,354. (2) A borough in Pa., noted for its iron manufactures. Pop. (1900), 8,042. (3) A town in Va., the center of a large tobacco growing district. Pop. (1900), 16,520.
- Daphne** (*daf'nê*).—In Greek mythology, a nymph; transformed by Apollo into the bay-tree.
- Daphne**, 10, 92.
- D'Arc, Jeanne**, Life of, 10, 366.
- Dardanelles**.—The strait which connects the Ægean Sea and the Sea of Marmora; the ancient Hellespont. It is 45 miles long and has an average width of from 3 to 4 miles; its narrowest point is 1¼ miles.
- Dare, Virginia**, 11, 40.
- Darien**. See PANAMA, ISTHMUS OF.
- Darius** (*da-rî'us*) **I**.—The son of Hystaspes, king of Persia, reigned (521-486 B. C.). He enlarged the boundaries of his kingdom by aggressive war; undertook the conquest of Greece, but was defeated at Marathon by Miltiades (490).
- Darius I.**, 10, 194.
- Darius II.**, 10, 188.
- Darius III. Codomannus**.—The last king of Persia (336-330 B. C.), was dethroned by Alexander the Great.
- Darius III. Codomannus**, 10, 189.
- Darius Hystaspis**, 10, 188.
- Darius the Great**, 14, 101.
- Dark Ages**, 10, 233.
- Dark and Bloody Ground, The**, is said to be the meaning of the Indian word for Kentucky, and applied to that state through its association with Indian warfare.
- Dark Horse**, 12, 244.
- Darkness, Symbolism of**, 2, 185.
- Darley, Felix Octavius Carr**.—Born at Philadelphia, 1822; died at Claymont, Del., 1888. An American artist, distinguished for his illustrations of Dickens, Cooper, Irving, and other authors.
- Darling, Grace**.—(1815-1842.) A young Englishwoman noted for her heroic rescue of a number of lives from a wrecked vessel, 1838.
- Darmstadt**.—In Germany; the capital of the grand duchy of Hesse. Commercial and manufacturing interests. Pop. (1895), 63,745.
- Darnley, Henry, Lord**, 10, 442.
- Dartmoor Massacre**, 11, 225.
- Dartmouth College** aid to poor students, 8, 47.
- Dartmouth College vs. Woodward**.—A celebrated case in the U. S. Supreme Court, conducted for the plaintiffs by Daniel Webster and resulting in 1819 in one of the most important decisions ever rendered by that tribunal. In 1816, the N. H. legislature amended the charter of Dartmouth College, increasing the number of trustees to 21, and creating a new corporation to which the property of the old corporation was transferred. The old trustees brought suit against Woodward, the secretary and treasurer of the corporation under the new charter, for the recovery of the property. The State court decided against them. The case was taken to the U. S. Supreme Court, which reversed the decision of the State court, declaring the charter of Dartmouth College to be "a contract within the meaning of that clause of the Constitution which prohibits States from passing any law impairing the obligation of contracts." This decision settled the law holding that a charter granted to a private corporation is a contract which cannot be altered in a material point without the consent of those who hold it, unless the power of revision is reserved to the legislature by a clause in the charter or by a general law of the State.
- Darwin, Charles Robert**.—(1809-1882.) The founder of the "Darwinian" theory of evolution, or "Darwinism" as especially enunciated in "The Descent of Man."
- Darwin, Charles**, 8, 21, 264.
- Theory of evolution, 4, 9.
- Dasartha**, Hindu king, 3, 322.
- "**Dash into the Enemy's Country**," 12, 244.
- Date**, 13, 95.
- Date-line, International**, 13, 95.
- Date-palm**, 5, 1.
- Date, Use of, in letter-writing**, 1, 91.

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- D'Aubigne, François**, 10, 411.
- Daughter**, Legal rights of a, 13, 308.
- Daughters of the Revolution**, 11, 83.
- D'Aumale, Duc**, 14, 130.
- Daubigny** (*dō-bēn-yī'*), **Charles François**.— (1817-1878.) A celebrated French landscape-painter.
- Daudet, Alphonse**.— (1840-1897.) A celebrated French novelist and dramatist.
- Davenant, Sir William**.— (1606-1668.) An English dramatist and poet.
- Davenport**.— A city in Iowa, important as a distributing center. Pop. (1900). 35,254.
- Davenport, John**, 11, 56.
- David**, 10, 183.
Arabic legend of, 3, 283.
- David, Jacques Louis**, 9, 264.
- David I.**, King of Scotland, died, 1153; was defeated at the battle of the Standard, near Northallerton (1138).
- David II.**— (1324-1371.) King of Scotland, son of Robert Bruce; was defeated and captured at the battle of Neville's Cross (1346).
- "**David Copperfield**."— A novel by Charles Dickens; in part, a history of his own early life.
- Davidson, Harry**.— Born at Philadelphia, Pa., 1858. A noted American wood engraver. His chief works are "Canterbury Cathedral," "Israel," "The Golden Gate," "An Old Mill."
- Davidson, William**, 11, 83.
- Da Vinci, Leonardo**, 9, 236.
- Davis, Charles Henry**, 11, 418.
- Davis, David**, 12, 245.
- Davis, H. D.**, Lord Mayor of London, on the secret of success in life, 8, 125.
- Davis, Henry Gassaway**, 12, 182.
- Davis, Henry Laurens**, 12, 245.
- Davis, Jefferson**, 11, 479.
- Davis, Jefferson C.**, 11, 493.
- Davis, John**, 11, 226.
- Davis, John C. B.**, 12, 245.
- Davis, Rebecca Harding**, on "Girls—Now and Then," 1, 247.
- Davis, Richard Harding**.— Born, 1864. An American writer of fiction.
- Davis Strait**.— A strait connecting Baffin Bay with the Atlantic Ocean, and separating Greenland from the Cumberland Peninsula.
- Davy, Sir Humphry**.— (1778-1829.) A noted English chemist, and inventor of the Davy lamp. He wrote extensively on scientific subjects and made most valuable additions to the science of chemistry.
- Davy, Humphry**, 14, 95.
- Davy safety-lamp**, 5, 229.
- Dawson, Sir John William**.— (1820-1899.) A noted Canadian naturalist and geologist.
- Dawson, Sir William**, 14, 230.
- Day and night**, 5, 111.
at the equinoxes, 5, 113.
at the poles, 5, 114.
book, 13, 39.
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Mean solar, 5, 112.
of Brahma, 10, 7.
on Mars, Length of a, 5, 130.
Shortest, 5, 113.
Sidereal, 5, 112.
- Day, William Rufus**, 12, 245.
- Days of Grace**, 13, 116.
Table of, 13, 116.
- Dayton**.— A city in Ohio, on the Miami River. Its manufactures include railway cars, paper, stoves, etc. Pop. (1900), 85,333.
- Dayton, Elias**, 11, 83.
- Dayton, William Lewis**, 11, 364.
- Dead account**, 13, 116.
- Deadly nightshade**, 5, 53.
- Dead Sea**.— In Palestine, a salt lake a few miles southeast of Jerusalem. Its principal tributary is the Jordan. Owing to the great quantity of salt it contains the water of the Dead Sea is very heavy and of great buoyancy. Length, 46 miles.
- Dead Sea, Saltness of the**, 5, 165.
- Deadwood**.— A city in S. D., situated in the Black Hills. It is an important mining town, and the district is said to abound in gold and silver. Pop. (1900), 3,498.
- Deaf and Dumb**, Alphabet used by the, 2, 375.
- Deaf-blind children**, Teachers of, 2, 374.
- Deak, Francis**, 10, 380.
- Dealing in Securities**.— See LAW OF BUSINESS.
- De Almagro**, 11, 39.
- De Amicis** (*de-ämē'chēs*), **Edmondo**.— (1846- .) An Italian writer. His works record for the most part his travels.
- Dearborn, Fort**, 11, 226.
- Dearborn, Henry**, 11, 83, 226.
- Dearborn, Henry Alexander Scammell**, 11, 364.
- Death, Black**, 10, 266.
- Death**, Talking to children about, 2, 339.
- Death Penalty**.— Modes of execution in some of the leading countries of the world (1889). In Bavaria, Belgium, Denmark, France, Hanover, and Saxony, the guillotine is used. The gallows in Austria, Netherlands, Portugal, Great Britain, and the United States except in New York, where electricity has been substituted. The musket is used in Ecuador and in

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- Oldenburg. In Prussia, the sword. In China, sword or the cord. Russia, musket, gallows, or sword. Switzerland, sword or guillotine. Spain garrote.
- Death Valley, or Amargosa Desert.**—A desert region in eastern Cal., 160 feet below sea-level.
- Debate,** List of questions suitable for, 8, 462.
- Debating-club as an educator,** 8, 458.
- Debating clubs,** 1, 56.
- Debenture,** 13, 116.
- De Berry, Duke,** 10, 372.
- Debit,** 13, 39, 116.
- Debs, Eugene V.,** 12, 182, 245.
- Debt, Public,** 12, 246, 352.
- Debtor,** 13, 116.
- Debts, British,** 11, 84.
of the world, National, 12, 352; 13, 167.
- Decadence,** Painters of the, 9, 252.
- Decameron.**—A celebrated work comprising 100 stories, by Boccaccio.
- Decamps, Alexander Gabriel,** 9, 267.
- De Castro, Vasca,** 11, 39.
- Decatur.**—(1) A town in northern Ala., on the Tennessee River. Pop. (1900), 3,114. (2) A town in Ga., the county-seat of Kalb Co. Pop. (1900), 1,418. (3) A city in Ill., on the Sangamon River. Pop. (1900), 20,754.
- Decatur, James A., Lieutenant,** 11, 230.
- Decatur, Stephen,** 11, 227.
- Decazes,** 10, 372.
- Deccan** (*dek'kan*).—The popular name for the peninsular portion of India south of the Nerbudda.
- Decemviri.**—(450 B. C.) A council of ten under the control of Appius Claudius, who were sent to Greece to study their laws and amend the Roman law. A popular insurrection overthrew it. (See VIRGINIA.)
- Decemvirs,** 10, 211.
- Deciduous Trees.**—Those trees whose leaves fall every autumn and are renewed each spring; opposed to the term evergreen.
- Decigram,** 13, 153.
- Deciliter,** 13, 153.
- Decimal system,** 13, 161.
- Decimals,** 13, 17.
- Decimeter,** 13, 153.
- Decision, The Might of,** 14, 119.
- Decius** (*dē-shi-us*), Caius Messius Quintus Trajanus.—Emperor of Rome 249-251. Killed in battle with the Goths.
- Decius,** 10, 231.
- Declamation,** 8, 453.
- Declaration of Independence,** 11, 84.
- Declaration of Rights,** 11, 84.
- "Decline and Fall of the Roman Empire."**—The title of a celebrated history written by Edward Gibbon, and first published in 1776-88.
- Decoration Day,** 13, 96.
- Decoration of the bathroom,** 1, 20.
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Drawing-room, 1, 12.
Hall ceiling, 1, 11.
Library wall, 1, 15.
Living-room wall, 1, 15.
Parlor, 1, 12.
Parlor wall, 1, 13.
Reception hall, 1, 12.
Sleeping-room, 1, 18.
- Decorative woods,** 1, 36.
Butternut, 1, 37.
Cedar, 1, 37.
Cherry, 1, 37.
Mahogany, 1, 36.
Maple, 1, 37.
Oak, 1, 37.
Rosewood, 1, 36.
Satinwood, 1, 37.
Walnut, 1, 37.
- Dee.**—(1) A river in North Wales and Cheshire. Length, 90 miles. (2) A river of Scotland, flowing into the North Sea. Length, 87 miles. (3) A river of Scotland flowing into the Solway Firth. Length, 48 miles.
- Deed,** What it includes, 13, 116.
- Deeds of real estate,** 13, 181.
- Deep-sea Soundings.**—The greatest known depth of soundings prior to the investigations of Capt. Ross in 1840 is supposed to be 6,000 ft. In 1843 Admiral Davis of the U. S. Coast Service obtained a depth of 12,600 ft. off Block Island. In 1847 Capt. Stanley of the English navy reported 15,000 ft. between Africa and South America. The North Atlantic though on an average a shallow basin has registered 23,250 ft. off Cape Sable. The South Atlantic furnishes 9,000 ft. near the Equator; the Indian Ocean, 12,000 ft. The apparatus employed is very delicate, yet strong; and greater accuracy is being secured with the later improvements.
- Deer,** 4, 27.
Fawn, 4, 27.
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Horns of the, 4, 28, 30.
Musk, 4, 30.
stalking, 4, 28.
Virginia, 4, 27.
- Deereeree** the wagtail and the rainbow, Australian fairy tale, 3, 37.
- Deerfield.**—A town in Mass., the scene of the "Bloody Brook Massacre" in 1675.

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"Deerslayer, The."—A novel by Fenimore Cooper; published in 1841.

Default, 13, 117.

Defective children, Home training of, 2, 373.

Mother's duty toward, 2, 373.

sense organs, Diseases resulting in, 2, 373.

senses the result of accidents, 2, 373.

Statistics regarding, 2, 373.

Defects in early education, To overcome, 8, 85.

"Defender."—A sloop yacht that defeated "Valkyrie III." in competition for the America's cup in 1895.

Defender of the Faith (*Fidei Defensor*).—A title conferred upon Henry VIII. as a recognition of his services in publishing a pamphlet against Luther and the Reformation in 1521.

Definite proportions, Law of, 5, 171.

Defoe, Daniel.—(1661-1731.) An English novelist and political writer. His popular reputation rests upon the fact that he wrote "Robinson Crusoe," which was published in 1719.

Defoe, Daniel, 14, 95.

Degree, 5, 108; 13, 161.

De Hooch, Pieter, 9, 310.

Deianira, 10, 107.

Deism.—The belief in God, as opposed to Atheism. There is a restriction of meaning, inasmuch as Deism rejects a belief in revelation, but rests upon the evidence of reason.

Dekagram, 13, 153.

De Kalb, Johann, 11, 84.

Dekaliter, 13, 153.

Dekameter, 13, 153.

Dekker, or Decker, Thomas.—Born about 1570. An English dramatist; author of a great many plays, and collaborator in the production of other plays with Middleton and others.

De la Bastie method of annealing glass, 5, 201.

Delaborde, Henri, Vicomte.—(1811-1899.) A French figure-painter; a pupil of Delaroche. Also the author of a number of valuable works on the history of art.

Delacroix (*de-lä-krywä'*), Ferdinand Victor Eugene.—(1799-1863.) The leading painter of the French "romantic" school.

Delacroix, Eugene, 9, 267.

De la Motte, 10, 415.

Deland, Mrs. Margaretta Wade.—Born 1857. A noted American novelist.

De la Ramée, Louise. ("OUIDA.")—Born, 1840. A noted English novelist.

Delaroche, Paul, 9, 266.

Delaware.—One of the Middle States, and one of the original Thirteen States of the American Union. Bounded on the north by Pa., east by N. J., Delaware Bay, and the Atlantic

Ocean, south and west by Md. The state took its name from Baron Delaware (Thomas West), an English lord who was governor and captain-general of the colony of Virginia, early in the 17th century; the first permanent settlement was by Swedes in 1638; it passed under the rule of the Dutch in 1655 and of the English in 1664; in 1682 it was united with Pennsylvania, but was separated in 1703; after the Revolutionary War it was the first state to ratify the Federal Constitution, Dec. 7, 1787; it was a slave state until 1863, but remained loyal to the Union during the Civil War. The surface is generally level and the soil fertile; the staple product is fruit, especially peaches; Dover is the capital and Wilmington the chief city; except R. I., it is the smallest state in the Union and has but three counties. Area, 2,050 sq. miles. Pop. (1900), 184,735. Called the Diamond State—small but of great wealth.

Delaware Indians.—A confederacy of Indians of the Algonquin stock, who called themselves the Lenni-Lenape ("original men" or "pre-eminent men") and at one time inhabited the valley of the Delaware. William Penn found them dwelling peaceably there, and cultivated friendly relations with them. Their chief council fires blazed on the site of the present city of Philadelphia. They refused to join the Iroquois against the English in 1726, but later they turned hostile to the Colonists and were driven beyond the Alleghanies. The remnants of the tribe, numbering about 1,600, now live, well civilized, in the Ind. Ter. among the Cherokees.

Delaware, Lord, 11, 42.

Delaware Water Gap.—A small town and summer resort in Pa., near which is a gorge, two or three miles in length.

Delft.—A town of south Holland, Netherlands, once celebrated for its manufacture of porcelain. Pop. (1894), about 31,000.

Delhi.—In British India, a division of the Punjab; also the name of the capital of the district and the division of the Punjab. Area of the division of Delhi 15,530 sq. miles; pop. about 5,000,000. Pop. of the district 750,000; of the city (1901), 208,385.

Delibes, Leo.—(1836-1891.) A French composer and one of the best-known writers of light opera of the day. His works, in this department, number over 25.

Della Porta on the pumping engine, 5, 276.

De Long, George Washington, 12, 246.

De Lotbinnière, Captain, 13, 439.

Delphin Classics.—An edition of the classics, which Louis XIV. ordered to be prepared for

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- the use of the dauphin. "*Delphinus*" is the Latin translation of dauphin. They were published in 1674.
- Delsarte, François Alexandre Nicolas Chéri.**—(1811–1871.) Originally a painter on China; then a distinguished tenor singer. Upon the sudden loss of his voice he gave instruction in dramatic and musical subjects. His desire was to make elocution a science. His system—the Delsartian System—is constantly gaining adherents.
- Del Sarto, Andrea,** 9, 227.
- Deltoides muscle,** 1, 275.
- Deluge,** Hindu version of the, 10, 9.
Arabic version of the, 3, 230.
- De Luque, Hernando,** 11, 39.
- Demades,** 10, 202.
- Demaphon,** 1, 198.
- Demerara.**—(1) A river in British Guiana, which enters the Atlantic at Georgetown after a course of 200 miles. (2) A county in British Guiana.
- Demeter,** 10, 95.
- Demetrius** (*de-mē'tri-us*).—(338–283 B. C.) A king of Macedonia, and son of Antigonus.
- Demetrius Soter,** 10, 185.
- Democratic Party,** 12, 246.
- Democratic societies,** 12, 247.
- Democritus** (*dē-mok'ri-tus*).—(460–357 B. C.) A Greek philosopher, sometimes called "The Laughing Philosopher," on account of his cheerful disposition and his custom of laughing at the follies of men. It is said that he put out his eyes so that the outside world would not distract him from his philosophical meditations.
- Demoline, M.,** quoted Anglo-Saxon supremacy, 2, 380.
- Demonetization of metal,** 13, 161.
- Demosthenes,** Life of, 10, 201.
referred to, 14, 37, 166.
- Demurrage,** 13, 117.
- De Medici, Cosmo,** 9, 373.
- Denderah** (*den'der-ä*).—A town on the Nile in Upper Egypt, noted for its ruins, especially that of the temple of Hathor.
- Denebola,** a star, 5, 142.
- Denmark.**—A kingdom of northern Europe, comprising a part of the peninsula of Jutland and a group of islands adjacent thereto. The government is a constitutional hereditary monarchy, with a legislature composed of two bodies. Norway, Sweden, and Denmark were united in 1397 under the latter name. Sweden separated from Denmark in 1523, and Norway was ceded to Sweden in 1814. An unsuccessful war waged in 1864 against Prussia and Austria resulted in the loss to Denmark of Schleswig-Holstein, and Lauenburg. The present constitution was adopted in 1866. Denmark has recently parted with her West Indian Island possessions to the United States for \$5,000,000. Area, including islands, 15,289 sq. miles; pop., about 2,200,000.
- Denmark** overrun by Prussian army, 11, 7.
- Density,** 5, 254.
Relative, 5, 254.
- Dentistry** a vocation for women, 7, 377.
- Denver.**—The capital of Col. It was first settled in 1858 and is now noted as an important railway and commercial center and for its large smelting works. Pop. (1900), 133,859.
- Denys Le Petit,** 13, 92.
- Deodorizer** defined, 5, 188.
- Department of Commerce,** 12, 180.
of State, 12, 395.
- Department stores,** by John Wanamaker, 13, 388.
- Dependencies** showing area and population, Table of, 11, 34.
- Depew, Chauncey Mitchell,** 12, 247.
referred to, 14, 196.
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on "Getting a Position and Keeping It," 13, 77.
- De Peyster, Abraham,** 11, 56.
- Deposit, Certificate of,** 7, 482.
- Deposition,** 13, 117.
- Deposits, Removal of public,** 11, 364.
- De Quincey, Thomas.**—(1785–1859.) An English essayist and writer for the magazines. He was a confirmed opium-eater, and his reputation rests chiefly upon his narrative entitled "Confessions of an English Opium-Eater."
- De Quincey, Style of,** 8, 375.
- Derby Day,** 13, 96.
- Derby, Elias Haskett,** 11, 85.
- Derne expedition,** 11, 232.
- De Rohan, Cardinal Louis,** 10, 415.
- Desaix,** 14, 106.
- Descartes** (*dā-kärt'*), **René.**—(1596–1650.) A French philosopher and founder of modern philosophy and of Cartesianism, who wrote voluminously upon philosophical subjects.
- Descartes,** referred to, 14, 95.
- Descent from the cross,** 9, 292.
- Desdemona.**—In Shakespeare's "Othello," the wife of Othello, the Moor, by whom she was smothered from a belief that she had been unfaithful to him.
- Deseret.**—The name by which Utah was formerly known and under which various attempts were made for admission into the Union.
- Deserted Village, The.**—The title of a poem by Oliver Goldsmith, published in 1770.

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Desiderius, 10, 240.

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Designing, 7, 286.

book-covers an occupation for women, 7, 401.

Designing wall-papers an occupation for women, 7, 403.

Designs for wood-carving, 7, 217.

Des Moines.—The capital of Iowa, noted as a great center of trade and of extensive and varied manufactures. It was made the state capital in 1857. Pop. (1900), 62,139.

Desmoulins (*dā-mō-lan'*), **Benoît Camille**.—(1760–1794.) A French revolutionist, who contributed to the excitement of the times by his pamphlets and other published matter. Guillotined at Paris.

De Soto, Hernando, or Fernando.—(1500–1542.) A Spanish soldier. He discovered the Mississippi River, 1541.

De Soto, Ferdinand, 11, 40.

made governor of Cuba, 11, 40.

reaches the Mississippi, 11, 40.

Despard's Conspiracy.—A conspiracy against the government, organized by an Irishman, Edward Marcus Despard (1751–1803), for which he was hanged in London.

Dessau.—The capital of Anhalt, Germany. The seat of the ducal palace and several fine art collections. The birthplace of the noted philosopher, Moses Mendelssohn. Pop. (1895), 42,375.

De Stael, Madame, 10, 343.

Detaille (*de-tü'y'*), **Jean Baptiste Édouard**.—Born, 1848. A noted French painter of battle scenes.

De Tocqueville (*tok'vil'*), **Alexis Charles Henri Clérel**.—(1805–1859.) A French statesman and writer. In 1831 he visited the U. S. as a special commissioner to study the prison system. The results of his studies in America were made the subject of a book ("On Democracy in America") which possessed such merit and value that it was crowned by the French Academy.

Detroit.—A port of entry in Mich., of which it is the first city in population and manufactures. It has an extensive American and Canadian trade in grain, wool, pork, etc. It is also noted for its manufacture of car-wheels. It is situated on the Detroit River. Pop. (1900), 285,704.

Detroit River.—The outlet for Lakes Superior, Michigan, Huron, and St. Clair into Lake Erie. It is a highway of the greatest internal commerce in the world.

Detroit (Mich.), Surrender of, 11, 232.

Dettingen (*det' ting-en*).—A village in Bavaria, at which George II. in command of the Anglo-German army defeated the French army under Noailles, June 27, 1743.

Deucalion.—A legendary king, whom, with his wife Pyrrha, Ovid in his "Metamorphoses" represents as the sole survivors of the flood.

De Valliere, Louise, 10, 410.

Development of a child at birth, 2, 56.

of ideas on the flight of time, 2, 338.

a sense of loss and change, 2, 336.

Order of, 2, 55.

Physical, at birth, 2, 57.

Devereux, Robert, second Earl of Essex.—(1567–1601.) A favorite of Queen Elizabeth, who occupied many state offices and enjoyed the confidence of the queen, but incurred her displeasure on account of his mismanagement of a rebellion in Ireland and was beheaded at London.

Devilfish, 4, 370.

Devil's darning-needle, 4, 358.

Devil's Lake.—A lake in the northeastern part of N. D.

Devitt, George Raywood, on Botany, 4, 391.
Chemistry, 5, 149.

Devon cattle, 4, 16.

Devonshire.—In southeastern England, a maritime county, noted for its cattle. Pop. (1901), 660,444.

Devor the goddess, 10, 20.

Dew.—The condensation of the aqueous vapor of the atmosphere under the influence of a falling temperature. The vapor of the atmosphere is deposited upon the earth in the form of mist or liquid.

Dewey, Commodore George, 11, 29.

Life of, 12, 248.

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Dewey, Dr. John, quoted on "The School and Society," 2, 449.

Dexter, Henry, 9, 412.

Dexter, Samuel, 11, 232.

Dextrose, 5, 233, 234.

Dhanwantra, 10, 10.

Diachylon.—Healing or adhesive plaster composed of litharge, or red oxide of lead, with olive oil, forming a kind of soap.

"Dial, The."—A literary magazine, the organ of the Transcendentalists. It was published at Boston and edited by Margaret Fuller (1840–42) and by Ralph Waldo Emerson (1842–44).

Diamond, April birthstone, 1, 195.

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Diana monkey, 4, 65.

Diana of Poitiers, 10, 409.

Dianthus caryophyllus, 5, 71.

Diaphragm, 1, 277.

Diarrhœa, Treatment of, 1, 333.

Dias, Bartholomeu.—(1445-1500.) A Portu-
guese navigator who sailed past the Cape of
Good Hope and Algoa Bay; the first to
double the south of Africa. He was lost in
a storm off the coast of Brazil.

Diastase, 5, 236.

Diatoms, 5, 102.

Dibdin, Charles.—(1745-1814.) An English
writer of sea songs, such as "Tom Bowling,"
"Ben Backstay," etc. He wrote also about
70 operas and musical dramas.

Dickens, Charles.—(1812-1870.) A celebrated
English novelist.

Dickens, Charles, referred to, 14, 24.

Dickens' description of an American board-
ing-house, 6, 14.

Dickinson, Anna Elizabeth.—Born, 1842. A
noted lecturer and advocate of woman suf-
frage and labor reform.

Dickinson, Emily.—(1830-1886.) An Ameri-
can poet.

Dickinson, Dr. Frances A., on "If I Were a
Girl Again," 1, 254.

Dickinson, John, 11, 85.

Dicotyledonous Plants.—Plants in which the
seed-plant or embryo is provided with two
leaves, lobes or cotyledons, or with more
than two. The stems are exogenous and are
usually branched.

Diderot (*dê-drô'*), Denis.—(1713-
1784.) A French writer and phil-
osopher.

Dido.—Another name for the Phœ-
nician goddess of the moon
(Astarte). Often confounded with
Elissa, the founder of Carthage.

Dido, Queen of Carthage, 10, 392.

Didot (*dê-dô*).—The name of a fa-
mous family of publishers in Paris,
which has existed as such for over
a century and a half.

Didymus (Gr., "The twin").—(1) A
name applied to the Apostle Thomas.
(2) An Alexandrian scholar, who
lived in the first half of the 1st
century.
(3) An Alexandrian scholar

(308?-399?) who, though blind from childhood,
became one of the most learned men of his day.

Dieppe (*dê-ep*).—A seaport in France, on the
English Channel, is a celebrated watering-
place. Pop., 25,000.

Dies Iræ.—A famous mediæval hymn on the
Last Judgment, the composition, it is be-
lieved, of Thomas of Celano, a native of
Abruzzi, and friend of St. Francis of Assisi,
who died in 1255. Sir Walter Scott has in-
troduced part of it into his "Lay of the Last
Minstrel":—

On that day, that day of ire,
Saith the King of Wisdom's sire,
Earth shall melt with fervent fire.

Dies Iræ, 13, 96.

Diet, 6, 13.

Coffee drinking, 6, 14.
" Eat to live," 6, 15.
Fast eating, 6, 14.
for dyspepsia, 6, 14.
Nervous diseases the result of improper,
6, 14.
Over-eating, 6, 13.
Proper, 6, 14.
Regular hours for meals, 6, 15.
Seasonable foods, 6, 13.
Water with meals, 6, 13.

Dietetics, Infant, 2, 38.

Dieu et Mon Droit.—"God and my Right" is
the royal motto of England. When Richard
I. of England fought the battle of Gisors in
France in 1198 (Sept. 20) he chose the expres-
sion as the pass-word for the day. It was first
used as the royal motto by Henry VI. (1422-
1461).

Diffusion, 5, 255.

Digestion.—Average time required for the di-
gestion of various articles of food:—

HOURS MIN.		HOURS MIN.	
Apples, sweet (boiled)...	2 30	Lamb (boiled).....	2 30
Barley, boiled.....	2	Milk (raw).....	15
Beans, Lima (boiled)...	2 30	Milk (boiled).....	2
Beef (roast)	3	Mutton (boiled).....	3
Beef (fried).....	4	Mutton (roast).....	3 15
Beef, salt (boiled).....	2 45	Oysters (roast).....	3 15
Bread	3 30	Oysters (stewed)	3 30
Butter	3 30	Pigs' feet, soused (boiled)	1
Cheese.	3 30	Potatoes (baked).....	2 30
Chicken (fricasseed)....	2 40	Pork, salt (stewed)....	3
Custard (baked).....	2 45	Pork (roast).....	3 15
Duck (roast).....	4	Rice (boiled).....	1
Eggs (raw).....		Sago (boiled).....	1 45
Eggs (soft boiled).....	3	Soup, barley.....	1 30
Eggs (hard boiled).....	3 30	Soup, chicken, etc.,	
Eggs (fried).....	3 30	(avg.).....	3 15
Fish	2 44	Tripe, soused (boiled)...	1
Fowl (roast).....	4	Turkey (roast).....	2 20
Hashed meat and vege-		Veal (boiled).....	4
tables.....	2 30	Veal (fried).....	4 30

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- Digestive system**, 1, 286.
 Diseases of the, 1, 328.
- Diggers**.—A tribe of North American Indians, so named from their habit of digging for roots for food. They are spread over Oregon, Idaho, Utah, California, Arizona, and Nevada.
- Dighton**.—A town near Taunton in Massachusetts. Near it is Dighton Rock, upon which there is an inscription wrongly attributed to the Northmen who visited America with Eric in the 10th century.
- "Dignity and Impudence."**—A painting of two dogs by Sir Edwin Landseer.
- Dijon**.—A town on the river Ouche, in the old duchy of Burgundy, France. It is famous for its Burgundy wine. Pop. (1896), 67,736.
- Dike formations in rocks**, 5, 461.
- Dilatata nigra**, 4, 430.
- Dilke, Sir Charles Wentworth**.—(Born, 1843.) An English author and politician, who has held several cabinet offices.
- Dill, James B.**, on "Business Chances," 13, 66.
- Dillon, John**.—(Born, 1851.) One of the leaders of the Irish National party in the British Parliament.
- Dime**, 13, 161.
- Dingley, Nelson**, 12, 254.
- Dingley law**, 13, 248.
- Dining-room**, 1, 15.
 Buffet, 1, 17.
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 curtains, 1, 16.
 furniture, 1, 16, 17.
 pictures, 1, 16.
 rugs, 1, 16.
 Sideboard, 1, 17.
 Table decoration, 1, 16.
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 Wall decoration, 1, 16.
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- Dinners**, 1, 50.
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 for a simple, 1, 51.
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 Rising from, 1, 52.
 Seating guests at, 1, 51.
 Time for, 1, 51.
- Dinosaurs**, 5, 465.
- Dinotherium**, 5, 466.
- Dinwiddie, Robert**, 11, 56.
- Diocletian**, 10, 231.
- Diodorus Siculus**.—A Greek historian who lived in the 1st century.
- Diogenes**.—(412-323 B. C.) A Greek cynic philosopher, who is said to have lived in a tub. He was seen walking through the streets with a lighted lantern in the daytime, and on being questioned regarding his peculiar action replied that he was looking for an honest man.
- Diogenes**, referred to, 14, 150.
- Diomed**.—A thoroughbred chestnut horse, that won the first Derby in 1780.
- Diomedes** (*dī-ō-mē'dēs*).—One of the most famous Greek warriors at the siege of Troy.
- Diomedes, king of Thrace**, 10, 106.
- Dionysius**.—(1) "The Elder" (430-367 B. C.). A tyrant of Syracuse.
 (2) "The Younger" (395-343 B. C.). A tyrant of Syracuse, succeeded the former.
 (3) A theologian died at Alexandria 265 A. D.
- Dionysius Exiguus**, 12, 25.
 of Portugal, 10, 286.
- Dionysus** (*dī-ō-nī'sus*).—The Greek god of wine. Also called Bacchus.
- Dionysus**, 10, 100.
- Diospyros kaki**, 4, 479.
 Virginiana, 4, 478.
- Diphtheria**, After effects of, 2, 373.
 Anti-toxin, 5, 96.
 Treatment of, 1, 351.
- Diplomatic convention**, 12, 240.
- Dipper, the great**, 5, 107, 135.
- Directors**.—Are those chosen by the stockholders of a company to manage the business.
- Directory, The**.—(Nov. 1, 1795-1799.) A council of five men who held the chief power in France. It was overthrown by Napoleon and the consulate succeeded it.
- Discharge**, 13, 117.
- Discipline**, Nature's indication of moral, 2, 223.
- Discobolus, Statue of**, 9, 356.
- Discount**, 13, 117.
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- Discounting**, 13, 51.
- "Discovery," The**, 11, 47.
- Discus-throwing**, Educational value of, 6, 18.
- Disease**, Germ-theory of, 5, 96.
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- Diseases, Treatment of**, 1, 320.
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- Diarrhœa, 1, 333.
- Diphtheria, 1, 351.
- Eczema, 1, 340.
- Fever sores, 1, 343.
- Frostbites, 1, 342.
- Hiccough, 1, 331.
- Hives, 1, 337.
- Indigestion, 1, 328.
- Measles, 1, 347.
- Mumps, 1, 349.
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- of the skin, 1, 336.
- Pneumonia, 1, 327.
- Prickly heat, 1, 336.
- Quinsy, 1, 325.
- Respiratory, 1, 320.
- Ringworm, 1, 338.
- Scarlet fever, 1, 348.
- Shingles, 1, 345.
- Snuffles, 1, 323.
- Sore throat, 1, 322.
- Stings, 1, 339.
- Thrush, 1, 331.
- Tonsilitis, 1, 324.
- Tooth rash, 1, 337.
- Varicella, 1, 346.
- Vomiting, 1, 332.
- Whooping cough, 1, 349.

- Dishonesty, Causes of, 2, 275.
- Curiosity a cause of, 2, 276.
- Truckling to, 14, 286.

Disinfectant defined, 5, 188.

Dismal Swamp, Great.—An extensive moras in southeastern Va. and northeastern N. C. It contains Lake Drummond and is traversed by a canal which connects Chesapeake Bay and Albemarle Sound; part of the swamp has been reclaimed for tillage.

Disraeli, Benjamin, Earl of Beaconsfield.—(1804-1881.) A celebrated English statesman and author. He was leader of the House of Commons for many years and was the foremost statesman of England in the Conservative party.

Disraeli, referred to, 14, 5.

Disraeli's first speech, 8, 267.

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Chicago, Ill.....	900	Richmond, Va.....	344
Cincinnati, Ohio....	744	St. Louis, Mo.....	1,048
Cleveland, Ohio....	568	St. Paul, Minn.....	1,300
Concord, N. H.....	292	Salt Lake City, Utah	2,452
Deadwood, S. Dak....	1,957	San Francisco, Cal..	3,250
Denver, Col.....	1,930	Savannah, Ga.....	905
Des Moines, Iowa....	1,257	Tacoma, Wash.....	3,209
Detroit, Mich.....	743	Topeka, Kan.....	1,370
Galveston, Tex.....	1,789	Trenton, N. J.....	57
Helena, Mont.....	2,423	Vicksburg, Miss.....	1,288
Hot Springs, Ark....	1,367	Vinita, Ind. Ter....	1,412
Indianapolis, Ind....	808	Washington, D.C....	288
Jacksonville, Fla....	1,077	Wheeling, W. Va....	496
Kansas City, Mo....	1,302	Wilmington, Del....	117
Louisville, Ky.....	854	Wilmington, N. C....	593
Memphis, Tenn.....	1,163		

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District of Columbia.—The Federal district which contains the national capital of the U. S. It lies on the eastern bank of the Potomac, between Md. and Va., and contains besides the city of Washington, which includes Georgetown, various small towns. It is governed by three commissioners appointed by the President and confirmed by the Senate. It was formed of cessions made by Md. in 1788 and Va. in 1789, comprising 100 sq. miles, part on each side of the Potomac River; was organized in 1791 and the seat of government was removed thither in 1800; the Va. portion west of the Potomac was retroceded to her in 1846. Territorial government was established in 1871, a provisional government succeeded in 1874, and the present form was established in 1878. Area, 70 sq. miles. Pop. (1900), 278,718.

Districts, 12, 254.

Dit d'Ysopet, French fable collection, 3, 185.

Diver, Northern, 4, 219.

Divers, Russian fable, 3, 210.

Dividend.—That share of the profits or interest in trade, stock, or venture, which belongs to the holder or proprietor in proportion to his share of stock.

Dividers, 7, 264.

"Divina Commedia" (*dē-vē'nä kom-mä'dē-ä*).—The celebrated epic poem of Dante, which was written in 1300-18.

Divisibility of numbers, 13, 16.

Division, 13, 15.

Divorce, 1, 1; 2, 6.

Law of, 13, 311.

Limited, 13, 312.

Dix, Dorothea Lynde.—(1805-1887.) An American philanthropist and author.

Dix, John Adams.—(1798-1879.) A statesman and general in the Union army. He was in public life for more than forty years. He entered the army at the age of 15, but at 30 resigned to study law; was secretary of State and afterward comptroller of N. Y.; U. S. senator (1845-49). Dix was secretary of the U. S. Treasury in 1861, and was the author of the famous words, in an official order: "If any man attempts to haul down the American flag, shoot him on the spot!" He was made a major-general of volunteers in 1861 and continued in service throughout the war, though his age rendered him incapable of active field duty. He commanded at Fortress Monroe and other fixed stations. During his political life he was an unyielding opponent of slavery.

Dixie, 11, 493.

Dixon, Jeremiah, 11, 493.

Dixville Notch.—An extraordinary ravine in N. H., near Colebrooke.

Djemasi ul-Aher, 13, 103.

Djemasi ul-Evel, 13, 103.

Dnieper (*nē'per*).—The third river in size in Europe. It flows through Russia into the Black Sea. Length about 1,200 miles.

Dniester (*nēs'ter*).—A river of Russia and Galicia, rising in the Carpathian Mts., and flowing into the Black Sea. Length about 800 miles.

Dobson, Austin.—Born, 1840. An English poet of note.

Doctors' Commons.—The term "Doctor" originally meant "teacher," and it was not until the 12th century that it became a title of honor for the learned. The Doctors' Commons was in the 8th century a college for the teachers of civil and ecclesiastical law. In 1568, the Society took quarters in a building where a number of courts were held and the whole section was called Doctors' Commons.

Dodd, William.—(1729-1777.) An English clergyman and writer; executed at London on a charge of forgery.

Dodder, 5, 68.

Dodecagon, 7, 283.

Dodecahedron, Regular, 7, 256.

Dodge, Grenville M., 11, 493.

Dodge, Mary Abigail (*pseudonym*, GAIL HAMILTON).—(1830-1896.) An American author. Among her works are: "Country Living and Country Thinking," "Gala Days," "Stumbling Blocks," "Battle of the Books," "Life of James G. Blaine," and "English Kings in a Nutshell."

Dodge, Mary Elizabeth (MAPES).—(1838-1905.) An American author, born in New York. Among her best-known works are:—"The Irvington Stories," "A few Friends," "Rhymes and Jingles," "Theophilus and Others," "Along the Way," "Donald and Dorothy," "When Life is Young," and "Hans Brinker or The Silver Skates." The latter received a prize from the French Academy and has been translated into foreign languages. Mrs. Dodge was the editor of *St. Nicholas* magazine from its first publication until her death.

Dodge, William Earl.—(1805-1883.) An American merchant and philanthropist noted for his disinterested labors on behalf of the freedmen and foreign missions.

Dodgson, Charles Lutwidge (*pseudonym*, LEWIS CARROLL).—(1832-1898.) An English clergyman and author; for many years lecturer on mathematics at Christ Church, Oxford. Popularly known by his books for

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children, especially by his "Alice's Adventures in Wonderland."

Dodo.—An extinct bird of the order of *Columba*; described as stupid and incapable of flying. Its remains were found on the Island of Mauritius, and it is from these bones that the naturalists have been able to form their conclusions as to the bird's characteristics.

Dodona, Temple at, 10, 88.

Doe, John, 13, 117.

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- Barbet, 4, 21.
- Beagle, 4, 20.
- Black-and-tan terrier, 4, 21.
- Blenheim spaniel, 4, 21.
- Bloodhounds, 4, 19.
- Bull-dog, 4, 22.
- Bull-terrier, 4, 22.
- Care of the, 1, 144.
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- Clumber spaniel, 4, 21.
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- Cocker spaniel, 4, 21.
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- Coon, 4, 55.
- Dalmation, 4, 19.
- Dandy Dinmont terrier, 4, 21.
- Danish, 4, 19.
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- English Gordon setter, 4, 20.
- English setter, 4, 20.
- English terrier, 4, 21.
- Eskimo, 4, 18.
- Fidelity of the, 1, 146.
- Food for the, 1, 145.
- Foxhound, 4, 20.
- Fox terrier, 4, 21.
- French poodle, 4, 21.
- German boarhound, 4, 19.
- Greyhound, 4, 19.
- Harrier, 4, 20.
- Hound, 4, 20.
- House breaking a, 1, 149.
- Ill-trained, a nuisance, 1, 147.
- Irish setter, 4, 20.
- Italian greyhound, 4, 19.
- King Charles spaniel, 4, 21.
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- Lurcher, 4, 19.
- Maltese spaniel, 4, 21.
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- Norfolk spaniel, 4, 21.
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- Scotch terrier, 4, 21.
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- Siberian, 4, 18.
- Skye terrier, 4, 21.
- Sleeping-place for a, 1, 145.
- Spaniel, 4, 20.
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- Suswex spaniel, 4, 21.
- Teaching tricks to a, 1, 150.
- Terrier, 4, 21.
- "The Shepherd's Chief Mourner," 1, 146.
- To destroy fleas on a, 1, 146.
- Toy spaniel, 4, 21.
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"Dog" watches, 13, 104.

Doge of Venice, 10, 277.

Dogfish, 4, 279.

Characteristics of the, 4, 279.

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Doggett, Thomas.—An English actor, died 1721. The custom now prevailing, of giving a prize in an annual rowing match on the Thames, was established by Doggett, 1716.

Dog's-tooth violet, 5, 42.

Dogwood, 4, 431.

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- Dolls, Paper**, 2, 149.
Playing with, 2, 434.
- Dolly Varden**.—A character in Dickens's "Barnaby Rudge."
- Dolores**.—A river in Col. and Utah, flowing through a cañon 3,000 feet in depth.
- Dolphin, The**, 4, 284.
among the ancients, Reputation of, 4, 285.
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Habits of the, 4, 284.
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Teeth of the, 4, 284.
used as an emblem, 4, 285.
- "Dombey and Son."**—A novel by Charles Dickens; issued first in numbers; in book form, 1848.
- Domenichino**, 9, 253.
- Domesday Book**, 10, 254.
- Domestic fowl**, 4, 105.
- Domett, Alfred**.—(1811-1887.) An English poet and colonial statesman.
- Domingo, Santo, or San Domingo**.—The Dominican Republic, West Indies.
- Dominic**, 10, 260.
- Dominica**.—One of the Lesser Antilles, West Indies. It belongs to Great Britain and is engaged chiefly in the sugar trade. Area, 291 sq. miles. Pop. (1891), about 27,000.
- Dominican Order**, 10, 260.
- Dominican Republic**.—A republic occupying the eastern part of the Island of Haiti, West Indies. Founded in 1844, after a revolution which separated it from Haiti. Pop., about 400,000. See SANTA DOMINGO.
- Dominique fowl**, 4, 106.
- Dominoes**, 6, 49.
- Domitian**, 10, 227.
- Dom Sanch I.**, of Portugal, 10, 285.
- Don**.—(1) An important river of Russia; length, 1,100 miles, navigable, 700 miles. (2) A river in Yorkshire, England. (3) A river of Scotland flowing into the North Sea near Aberdeen.
- Dona, Andrea**, 10, 307.
- Donatello**, 9, 343.
- "Donation of Pepin,"** 10, 260.
- Dongan Charter**, 11, 56.
- Don Giovanni**.—An opera by Mozart, first produced in 1787.
- Don Giovanni de la Fortuna**, Italian fairy tale, 3, 53.
- Donizetti, Gaetano**.—(1797-1848.) A noted Italian composer of operas.
- Donkey**, 4, 15.
Characteristics of the, 4, 15.
- Donnelly, Ignatius**.—Born at Philadelphia, 1831. A noted politician, author, and student of Shakespeare. He was elected lieut.-gov. of Minn. in 1859 and 1861, and Republican member of Congress in 1863. He is the author of "Atlantis," "Ragnarok," and "The Great Cryptogram," the latter a cipher which he claimed to have discovered in the plays of Shakespeare, proving their Baconian authorship.
- Donner, Georg Raphael**, 9, 394.
- Donnybrook**.—A village near Dublin, Ireland, famous at one time for its annual fair, which was established under King John and ceased to exist in 1855.
- Don Pasquale**.—An opera by Donizetti, produced first in 1843.
- "Don Quixote."**—The title of a famous romance by Cervantes, published at the beginning of the 17th century.
- "Don't Give up the Ship,"** 11, 232.
- Door, Battened**, 7, 189.
Paneled, 7, 189.
Making a, 7, 189.
- Doorkeeper**, 12, 255.
- Dordrecht, or Dort**.—A seaport town of Holland, near Rotterdam; said to be the oldest town in Netherlands. It has extensive lumber interests. Pop. (1899), 38,459.
- Doré, Paul Gustave**.—(1833-1883.) A noted French painter and illustrator, popularly known by his illustration of the Bible, the "Divina Commedia de Dante," and "Don Quichotte."
- Dorian Migration**, 10, 189.
- Dorking, Battle of**.—A work of fiction by General Sir George T. Chesney (1871), which describes an imaginary invasion of England by a foreign army; it called attention to England's need of better defense against foreign powers.
- Dorking fowl**, 4, 107.
- Dorr, Thomas Wilson**, 11, 365.
- Dorr Rebellion**, 11, 364.
- Dorsal vertebræ**, 1, 274.
- Dotheboys Hall**.—In "Dickens's Nicholas Nickleby," the name of the Yorkshire school for boys, where Nicholas served as an assistant teacher.
- Dou, Gerard**, 9, 309.
- Doubleday, Abner**, 11, 494.
- Doubleday, F. N.**, advice to young authors, 8, 236.
- Doubtful States**, 12, 255.
- Doughface**, 11, 365.
- Doughfaces**, 11, 313.
- Douglas, Ellen**.—The heroine of Sir Walter Scott's poem, "The Lady of the Lake."

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- Douglas, James, Earl of.**—The ninth and last earl who in 1452-55 headed a rebellion against James II., for which he was outlawed and deprived of his estates. He was the father of Ellen Douglas, "The Lady of the Lake."
- Douglas, Stephen Arnold**, 11, 365.
- Douglass, Frederick.**—(1817-1895.) A noted colored American orator and journalist. A slave, born on the plantation of Col. Edward Lloyd, he escaped from his master in 1838 and subsequently became an agent of the Mass. Anti-slavery Society. He was the founder at Rochester, of the paper, "The North Star," and at Washington, D. C., of "The New National Era." He was U. S. marshal for the District of Columbia (1876-81); recorder of deeds in the district (1881-86); in 1889 U. S. minister to Haiti. He published "The Life and Times of Frederick Douglass from 1817 to 1882," an autobiography.
- Douglass, Frederick**, 14, 168.
- Douglass, George**, 10, 443.
- Doulton, Henry**, maker of English stoneware, 1, 220.
- Doulton-ware, Sgraffito**, 1, 220.
- Dove**, Eggs of the, 4, 115.
Nest of the Carolina, 4, 115.
Mourning, 4, 115.
- Dover.**—A seaport of Kent England; it is a popular health resort and has much historical interest. Pop. (1891), 33,418.
- Dover, Strait of.**—A strait connecting the English Channel with the North Sea and separating England from France. Width at Dover, 21 miles.
- Dover, Treaty of.**—Between Charles II. and Louis XIV. A secret treaty, concluded at Dover, 1670, among the terms of which Charles was to aid France against Holland, and France to be responsible financially and to supply troops.
- Dow, Neal**, 12, 255.
- Dowels**, 7, 211.
- Downes, John**, 11, 232.
- Downing, Major Jack.**—A pseudonym used by Seba Smith, in his letters in Yankee dialect.
- Doyle, A. Conan (Dr.).**—Born, 1859. A Scottish novelist, popularly known by his "Adventures of Sherlock Holmes."
- Doyle, Rev. A. P.**, on the "Labor Problem," 13, 282.
- Doyle, Richard.**—(1824-1883.) An English artist.
- Drachma of Greece**, 13, 155.
- Drachmann, Holger Henrik Herholdt.**—Born, 1846. A noted Danish writer.
- Draco.**—In ancient astronomy, a northern constellation.
- Draco, or Drakon.**—An Athenian legislator of the 7th century.
- Dracomus**, famous stone, 1, 195.
- Draft**, 13, 51.
Bank, 13, 50.
Military, 11, 232, 494.
New York, 13, 251.
Riots, 11, 494.
Safety of a bank, 13, 242.
Sight, 13, 197.
- Dragonades.**—A form of persecution of the French Protestants, under the government of Louis XIV. This particular persecution was at the hands of the troops of dragomen, who were licensed by the King to commit various misdeeds against the Protestants.
- Dragon-fly**, 4, 358.
Characteristics of the, 4, 358.
Habits of the, 4, 359.
Reproduction of the, 4, 259.
- Dragon's blood**, 5, 55.
- Drake, Sir Francis.**—Born about 1540; died, 1596 (O. S.). A naval hero of England. He made many adventurous voyages and circumnavigated the globe, 1577-80.
- Drake, Sir Francis**, 10, 301.
- Drake, Frederick**, 9, 404.
- Drake, Joseph Rodman.**—(1795-1820.) An American poet.
- Dramatic plays for children**, 2, 133.
- Draper, John William.**—Born in England, 1811; died at Hastings-on-the-Hudson, N. Y., 1882. A scientist and historian, noted for his researches in chemistry, physiology, and photography. He came to America in 1832 and became professor of chemistry in the University of New York in 1839 and president of the Medical College in 1850. His principal works are "Text-book on Chemistry," "Human Physiology," "History of the Intellectual Development of Europe," "History of the American Civil War."
- Draper, Sir William.**—(1721-1787.) An English officer, who took charge of an expedition against Manila (1762). He is noted for his controversy against the mysterious "Junius."
- Draperies**, 1, 35.
for library windows, 1, 15.
- Draughts, or Checkers**, 6, 86.
- Drave.**—A river in Austria-Hungary. It rises in Tyrol and forms the boundary between Hungary and Croatia and flows into the Danube after a course of 465 miles.
- Drawback**, 13, 117.

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Catch-all, To draw and fold a, 7, 244.
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Square box, To draw and fold a, 7, 243.
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Drawing, Mechanical, 7, 259.

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To draw an ellipse the major axis and the distance between the foci being given, 7, 284.
To draw a helix of given diameter and pitch, 7, 285.
To draw an involute, 7, 285.
To draw a parabola, 7, 285.
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To draw a perpendicular to a line from a point outside, 7, 278.
To draw a perpendicular to a straight line from a point within that line, 7, 277.
To find the center of a given arc having given its radius, 7, 280.
To inscribe a regular dodecagon in a given circle, 7, 283.
To inscribe a regular hexagon in a given circle, 7, 283.
To inscribe a regular octagon in a given circle, 7, 283.
To pass a circle through three given points not in the same straight line, 7, 280.
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Drawings of machines, Working, 7, 290.

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Drayton, William Henry, 11, 85.

Dred Scott, 11, 329.

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Dresden.—The capital and a principal city of the kingdom of Saxony; possessed of much historical interest. Pop. (1900), 395,349.

Dresden, Treaty of.—A treaty consummated in 1745, between Prussia, Austria, and Saxony; it ended the Silesian War.

Dress and success, 14, 322.

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Cost of children's, 2, 432.

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Tailor-made costume, 1, 161.

Taste in, not dependent upon money, 1, 183.

Velveteen, 1, 167.

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Dressers, Dutch, 1, 17.

Dreux, Battle of.—Dec. 19, 1562, about 15,000 Huguenots, under Condé, met and were defeated by an equal number of men under Montmorency. Condé was taken prisoner.

Drew, John.—Born, 1853. American actor, son of John Drew.

Drew, Mrs. (LOUISA LANE).—(1820-1897.) An English actress; wife of John Drew, comedian.

Dreyfus, Alfred (drā-füs').—A French officer of Jewish descent who was the victim of a conspiracy. Was accused of treason, convicted, degraded, and imprisoned. By the efforts of M. Zola, he was released and granted a new trial, which resulted in the vindication of his character. His complete vindication was made full and formal. In 1906 he was not only restored to the rank formerly held by him, but he was promoted to the rank of major and assigned to his old company. On the spot on which he was degraded, he was presented with the cross and order of the Grand Legion of Honor. The fullest possible notice was officially taken of the amende made to him and it was made the subject of official legislation.

Dreyschock, Alexander.—(1818-1869.) Composer and pianist; for many years associated with the conservatory of St. Petersburg.

Drôme.—A department of France, engaged in the manufacture of wine and silk. Pop. (1896), 303,491.

Dromedary, 4, 90.

Drowning, Treatment in apparent death from 1, 356.

Druggist and his business, by John A. Snively, 13, 404.

Druids.—(1) In ancient times, the priests of the Celts of Gaul, Britain, and Ireland. (2) The members of a society founded in London, 1781, and called the United Order of Druids.

Drum, The, 4, 281.

Characteristics of the, 4, 281.

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 - Characteristics of the, 4, 282.
 - Flesh of the, 4, 281.
 - Habits of the, 4, 282.
- Sea, 4, 281.
- Sheepshead, 4, 282.
- Young, 4, 281.

Drummer who succeeds, by Miles M. O'Brien, 13, 374.

Drummond, Henry.—(1851-1897.) A Scottish clergyman and author. Among his most widely read works is "Natural Law in the Spiritual World."

Drummond, quoted on reason, 2, 166.

Drummond, William, of Hawthornden.—(1585-1649.) A noted Scottish poet.

Drummond Lake.—A lake in Va., situated in the middle of the Great Dismal Swamp.

Drury Lane.—A street of London, so called from the Drury House, built by Sir William Drury in the 16th century.

Druses.—A people and religious sect of Syria.

Drusilla, Livia.—Wife of Augustus and mother of Tiberius.

Dry measure, 13, 149, 219.

Dryden, John.—(1631-1700.) An English poet and dramatist. Much of his work was along the line of political satire.

Dry Tortugas.—A group of coral keys in the Gulf of Mexico, included in Monroe Co., Fla. During the Civil War a penal station was established on one of them. Dr. Mudd and others of the Lincoln conspirators were confined here.

Duane, William John, II, 366.

Du Barry, Comtesse, Jeanne Bécu, or Marie Jeanne Gomar de Vaubernier.—(1746-1793.) Courtesan of Louis XV., was notorious for her extravagance. She was guillotined at Paris.

Du Barry, Comtesse, 10, 341.

Dublin.—The capital of Ireland is situated on the Liffey on Dublin Bay on the east coast of Ireland. Population (1901), 289,108.

Dubois, Cardinal, 10, 341.

Dubois, Paul, 9, 401.

Dubuque.—A city in Iowa, noted for its large trade in lumber and grain. In its vicinity are several lead mines. Pop. (1900), 36,297.

Du Chaillu, Paul, 12, 255.

Duck, 4, 110.

- Acorn, 4, 110.
- Bay, 4, 110.
- Canvas-back, 4, 110.
- Domestic, 4, 110.
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- Fish-eater, 4, 110.
- Mallard, 4, 110.
- Pond, 4, 110.
- Red-head, 4, 110.
- River, 4, 110.
- Sea, 4, 110.
- Summer, 4, 110.
- Tree, 4, 110.
- Wild, 4, 110.
- Wood, 4, 110.

Duck and the Serpent, Spanish fable, 3, 204.

Ducrot (*dü-krō'*), **Auguste Alexandre.**—(1817-1882.) A French general who commanded a division in the Franco-German War (1870) under MacMahon.

Dudley, Governor Thomas, 11, 54.

Dudley, Joseph.—(1647-1720.) He was one of the commissioners for the united colonies of New England (1677-81); appointed president of New England (1686); became chief-justice of the Supreme Court (1687); was chief-justice of N. Y. (1690-93); governor of Mass. (1702-15).

Dugommier, 14, 175.

Duke of Guise, 10, 295.

Dulcamara, 5, 69.

Dull children, 2, 104.

Dullness in children, 2, 104.

Dulse, 5, 102.

Duluth.—A city and lake port in Minn., at the western end of Lake Superior; terminus of the Northern Pacific Railway; has an extensive trade in grain, and is noted for its ship-building industry. Pop. (1900), 52,969.

Dumas (*dü-mä*), **Alexandre Davy de la Pailleterie, or Alexandre Dumas père.**—(1803-1870.) A noted French novelist and dramatic author.

Dumas, Alexandre, or Alexandre Dumas fils.—(1824-1895.) A French author and dramatist, son of the above.

Dumas, General, 14, 83.

Dumas, Influence of manual training on the life of, 7, 6.

Du Maurier (*dü mō-ryā'*), **George Louis Palmella Busson.**—(1834-1896.) An English artist and author.

Dumbarton.—(1) A shire in the center of Scotland. Pop. (1901), 113,870. (2) A seaport town in the shire and the capital of it, at the junction of the Leven and the Clyde, 13 miles from Glasgow. Pop., about 18,000.

Dumb-bell, The Wooden, 6, 28.

Dumfries.—(1) A shire in the south of Scotland, bordering on Solway Firth. Pop. (1901), 72,569. (2) The capital of the shire on the

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- Nith. Robert Burns died here. Pop., about 18,000.
- Dumont, Augustin Alexandre**, 9, 401.
- Dumouriez** (*du-mö-ryā*), **Charles François**.—(1739-1823.) A French general who served in the Seven Years' War, and went into exile during the French Revolution.
- Dumouriez, General**, 10, 345.
- Duna, or Dwina**.—A river in Russia which flows into the Gulf of Riga, after a course of 500 miles.
- Dunbar**.—A seaport in Haddingtonshire, Scotland, 27 miles from Edinburgh. A battle was fought at this place between Cromwell and the Royalists (1650) in which the Scots were defeated.
- Dunbar, Battle of**, 10, 322.
- Dunciad, The**.—A satirical poem written by Alexander Pope.
- Dundee**.—A town in Forfarshire, Scotland, on the coast. The third city in Scotland. Pop., 160,871.
- Dunkirk**.—A city and lake port of N. Y. on Lake Erie. The terminus of a division of the Erie Railway. Pop. (1900), 11,616.
- Dunkirk**.—A seaport in France on the Straits of Dover. It was strongly fortified and changed hands many times in the wars between France and England. Pop., about 40,000.
- Duns Scotus**.—(1265-1308.) A famous scholar and founder of a philosophic system. His name—Duns—came to be applied satirically to ignorant persons, whence our word "dunce."
- Dunstan, St.**—(925-988.) An archbishop of Canterbury.
- Duodecimo**, 13, 151.
- Duodenum**, 1, 278.
- Duodi**, 13, 97.
- Dupont, Samuel French**, 11, 495.
- Dupré, Giovanni**, 9, 399.
- Dupré, Jules**.—(1811-1889.) A celebrated French landscape-painter.
- Duquesne, Fort**.—A fort erected by the French in 1754 on the present site of Pittsburg, Pa.; taken by the English in 1758.
- Duquesnoy, François**, 9, 395.
- Dura mater**, 1, 287.
- Duran, Carolus** (CHARLES AUGUSTE ÉMILE DURAND).—Born, 1837. A celebrated French portrait-painter.
- Durand, Asher Brown**.—(1796-1886.) A noted landscape-painter and engraver.
- Durer, Albrecht**, 9, 318.
- Durga**, 10, 20.
- Durham**.—A county of northern England; rich in minerals and noted for its cattle. Area, 647,281 sq. miles; pop. (1901), 1,187,324.
- Durham cattle**, 4, 16.
- Durham Station**.—A small town in N. C., where the Confederate general, J. E. Johnston, with 29,924 men, surrendered to Gen. W. T. Sherman, Apr. 26, 1865.
- Duse** (*dö'sā*), **Eleanora**.—Born, 1861; a noted Italian actress.
- Dusky grouse**, 4, 126.
- Düsseldorf**.—An important commercial city of Prussia. It is the seat of one of the leading art schools of Europe. Pop. (1900), 213,767.
- Dutch colonists in America**, 11, 47.
- commercial growth, 10, 300.
- dressers, 1, 17.
- East India Company, 11, 15.
- genre painters, 9, 307.
- painting, Modern, 9, 328.
- republic, Rise of the, 10, 299.
- Duties ad valorem**, 13, 249.
- Duties, Conflicting**, 2, 6.
- Custom, 13, 247.
- Duties of the parent toward the school**, 1, 447.
- Duty, Transit**, 13, 241.
- Duxbury**.—A town in Mass., the terminus of the French Atlantic cable, laid from Brest in 1869. Pop. (1900), 2,075.
- Dvorák** (*dvor' zhäk*), **Antonin**.—Born in Bohemia, 1841. A celebrated composer.
- Dwight, Timothy**, on college training, 8, 140.
- Dyce, Alexander**.—(1798-1869.) A British literary critic and student of Shakespeare. Best known through his edition of the works of Shakespeare.
- Dyer, or Dyar, Mrs. Mary**.—Died at Boston, Mass., 1660. She was a Quaker fanatic, who on pain of death, if she returned, was twice banished from the Massachusetts colony. Refusing to obey the mandate, she was hanged on Boston Common.
- Dyes, Aniline**, 5, 243.
- Dynamite**, 5, 174.
- Dynamo**, 5, 318.
- Dyspepsia, Diet for**, 6, 14.

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Nest of the bald, 4, 115.

"Old Abe," 4, 135.

Veneration for the, 4, 133.

Washington, 4, 133.

Eagle, the gold coin, 13, 161.

Eagle, the Cat and the Sow, a Latin fable, 3, 175.

Eagle Pass.—A place in southwestern Tex., on the Rio Grande, where the Mexican International railroad connects with the Southern Pacific.

Eames (*ēms*), **Emma**.—An American soprano singer; was born at Shanghai, China, in 1868. She married Mr. Julian Story in 1891.

Eames, John, on a college education, 8, 82.

Ear bones, 1, 273.

Earle, Pliny.—Born at Leicester, Mass., 1762; died there, 1832. An inventor, chiefly known by his invention of a machine for making cards for cotton and wool-carding.

Earle, Pliny.—Born at Leicester, Mass., 1809, died at Northampton, Mass., 1892, son of Pliny Earle, noted for his humane treatment of the insane. He was professor of psychology in Berkshire Medical Institution at Pittsfield, Mass., in 1852, and was appointed Superintendent of the Mass. State Hospital for the Insane in 1864. He published "A visit to Thirteen Asylums for the Insane in Europe," and "The Curability of Insanity."

Earle, Thomas, 11, 366.

Early, Jubal Anderson, 11, 495.

Earth, The.—The third planet in order of distance from the sun—Mercury and Venus being nearer to it. It is in shape a sphere slightly flattened at the poles and bulged at the equator hence it is called an oblate spheroid. The equatorial diameter or axis measures 7,926 miles and 1,041 yds., and the polar diameter is 7,899 miles and 1,023 yds. The earth revolves upon its axis, completing its diurnal or daily revolution in a sidereal day, which is 3 minutes and 55.9 seconds shorter than a mean solar day. It revolves around the sun in one sidereal year, which is 365 days, 6 hours, 9 minutes, and 9 seconds. Its orbit or path around the sun is

an ellipse, having the sun in one of the foci. The earth's mean distance from the sun is 93,000,000 miles. Its axis is inclined to the plane of its orbit at an angle of $23^{\circ} 27' 12.68''$. The circumference at the equator measures 24,899 miles. The total surface is 196,900,278 sq. miles, and the solid contents is 260,000,000,000 cubic miles. As we descend into the earth the temperature rises at the rate of 1° Fahr. for every 50 ft. At the depth of 10 or 12 miles the earth is red-hot, and at a depth of 100 miles the temperature is such that at the surface of the earth it would liquefy all solid matter in the earth.

Earth, Interior of the, 5, 423.

Measure of the, 13, 148.

Poles of the, 5, 110.

Shape of the, 5, 106.

Earthen pot and the iron pot, French fable, 3, 187.

Earthenware, Chemistry of, 5, 214.

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Earthquakes, 5, 246.

Great, 5, 246.

Earthworm, 4, 375.

East, the spirit of the earth, 10, 54.

Easter, 13, 96.

Easterling, 13, 154.

Eastern Question.—In its broad, political sense, this means the difficulties which have arisen from time to time regarding the diplomatic relations between Turkey and Russia.

Easthampton.—A town in Mass., noted for its manufactures and as the seat of Williston Seminary. Pop. (1900), 5,603.

East Indies.—The two great peninsulas of southern Asia and all the adjacent islands from the Indus to the Philippines.

East Liverpool.—A town in Ohio, on the Ohio River, noted for its manufactures of pottery. Pop. (1900), 16,485.

Eastman, Seth, 11, 496.

East of the Sun and West of the Moon, Norse fairy tale, 3, 134.

Easton.—A city in Pa., noted for its extensive manufactures and as the center of a large iron ore district. It is the seat of Lafayette College. Pop. (1900), 25,238.

Easton, Nicholas, 11, 56.

Eastport.—A seaport in Me., the easternmost town of the U. S. Pop. (1900), 5,311.

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- Eaton, Daniel Cady.**—Born at Fort Gratiot, Mich., 1834; died at New Haven, 1895. A noted botanist, grandson of Amos Eaton. He became professor of botany at Yale College in 1864, and was the author of "Ferns of the Southwest" and "Ferns of North America."
- Eaton, George W.**—Born at Henderson, Pa., 1804; died at Hamilton, N. Y., 1872. A Baptist minister and president of Madison University (1856-68), as also of Hamilton Theological Seminary (1861-71).
- Eaton, Nathaniel, 11, 56.**
- Eaton, Theophilus.**—Died at New Haven, Conn., 1658. The first governor of the New Haven Colony from 1639 until 1658, the date of his death.
- Eaton, William, 11, 233.**
- Eau Claire.**—A city in Wis., noted for its extensive lumber trade. Pop. (1900), 17,517.
- Ebers, Carl Friedrich.**—(1770-1836.) A German composer of music.
- Ebers, Georg.**—(1837-1898.) A German novelist and Egyptologist.
- Eblis, or Iblis.**—In Arabian mythology, the chief of the evil spirits.
- Ebony, 5, 1.**
- Ecbatana, 10, 186.**
- Ecce Homo.**—The name applied to representations of Christ with the crown of thorns. The words are Latin and mean "Behold the man." They call attention to the human, or man nature, of Jesus and his capacity for suffering.
- Echinoderms 4 309.**
 Characteristics of the, 4, 309.
 Habits of the, 4, 309.
- Echo.**—In Greek mythology, a mountain nymph. Through her love for Narcissus she pined away until she became a bodiless voice.
- Echo, the nymph, 11, 406.**
- Echo Cañon.**—A remarkable cañon in northern Utah in the Wahsatch Mountains.
- Echoes, 5, 386.**
- Eck, Johann von.**—(1486-1543.) A German theologian, noted for his fierce opposition to Luther.
- Eckert, Thomas Thompson, 11, 496.**
- Eclipses, Accuracy of the prediction of, 5, 128.**
 Causes of, 5, 127.
 Lunar, 5, 127.
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 Total, 5, 128.
- Ecliptic, 5, 114.**
- Economic progress, of the 19th century, 13, 330.**
- Economy, 14, 278.**
 of thoroughness, 14, 216.
 Teaching children, 7, 441.
- Ecuador.**—A republic of South America bounded on the north by Colombia, south by Peru, west by the Pacific Ocean, and eastward its claims extend to the confines of Brazil. The country is traversed from north to south by the Andes and contains some of the highest peaks in South America. The chief products are sugar, rubber, cacao, and hides. The inhabitants are whites of Spanish descent, Indians, and mixed races. Ecuador was conquered by the Spaniards in 1533-34. With the aid of Bolivar, the Spanish rulers were deposed and the country was united to the Colombian Confederation. It seceded in 1830, and adopted its present name. Political revolutions have been frequent in its history. Area, about 120,000 sq. miles; pop., 1,270,000.
- Eczema, Treatment of, 1, 340.**
- Eddas, 10, 117.**
 The elder edda, 10, 117.
 The younger edda, 10, 117.
- Eddystone Lighthouse.**—On the Eddystone Rocks, off the coast of Plymouth, in the English Channel. The first structure, which was destroyed in 1703, was commenced in 1696. Two lighthouses were successively erected and destroyed after this, the foundation of the present structure being commenced in 1879.
- Eddystone Lighthouse, 14, 216.**
- Edentata, 4, 11.**
- Edgehill.**—In England; scene of the first battle of the civil war (Oct. 23, 1642) between the Royalists under Charles I. and the Parliamentarians under the Earl of Essex.
- Edgeworth, Maria.**—(1767-1849.) An English novelist.
- Edict of Nantes.**—An edict issued by Henry IV. by the terms of which Protestant subjects were tolerated. It was confirmed by Louis XIII. in 1610 and by Louis XIV. in 1652, but was revoked in 1685 by Louis XIV.
- Edict of Nantes, 10, 297.**
- Edinburgh.**—The ancient capital of Scotland. Seat of the judicial and administrative government of the country. A noted publishing center. Pop. (1901), 316,479.
- "Edinburgh Review."**—A literary and political review established at Edinburgh in 1802.
- Edison, Thomas Alva, 5, 329.**
 on "How to Succeed as an Inventor," 5, 369.
 referred to, 14, 26, 163, 245.
- Edith.**—Died, 1075. Wife of Edward the Confessor.
- Edmund, Saint.**—(840-870.) King of East Anglia (855-870).
- Edmund, Saint.**—(1170-1240.) Archbishop of Canterbury.

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Edmund I., "The Magnificent."—(922-946.)
King of the West Saxons and Mexicans
(940-946).

Edmund II., "Ironsides."—(989-1016.) King
of the West Saxons (April-Nov., 1016).

Edmunds, George Franklin, 12, 256.

Edmunds Bill, 12, 256.

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Wrestling, 6, 18, 20.

Edward, "The Martyr."—(963-979.) King of
the West Saxons (975-979).

Edward, "The Confessor."—(1004-1066.) King
of the West Saxons (1045-1066).

Edward I., "Longshanks."—(1239-1307.) King
of England (1272-1307).

Edward I. of England, 10, 263.

Edward II.—(1284-1327.) King of England
(1307-1327).

Edward III.—(1312-1377.) King of England
(1327-1377).

Edward III. of England, 10, 266.

Edward IV.—(1441-1483.) King of England
(1461-1483).

Edward IV. of England, 10, 274.

Edward V.—(1470-1483.) King of England
(April-June, 1483).

Edward VI.—(1537-1553.) King of England
(1547-1553).

Edward VI. of England, 10, 301, 437; 14, 195.

Edward VII.—(1841-) King of England
(1901-).

Edward, Prince of Wales, "The Black Prince."
(1330-1376.)

Edward of Portugal, 10, 286.

Edward the Confessor, 10, 249, 250.

Edwards, Amelia Blandford.—(1831-1892.)
An English novelist and writer of miscellane-
ous matter. Through her archæological studies
she became honorary secretary of the Egyp-
tian exploration fund; lecturer on Egypt and
its antiquities.

Edwards, George.—(1693-1773.) An English
naturalist.

Edwards, Jonathan, 11, 54, 57.

Edwards, Justin.—Born at Westhampton,
Mass., 1787; died at Virginia Springs, Va.,
1853. An American clergyman, noted as a
temperance advocate and author of various
tracts on temperance subjects.

Edwin Drood, Mystery of.—The novel by
Dickens which was left unfinished at his
death.

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- Habits of the, 4, 300.
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- Characteristics of the, 4, 300.
- How caught, 4, 301.
- Muræna, 4, 300.
- Characteristics of the, 4, 300.
- Valued by the Romans, 4, 301.

Eel-pots, 4, 301.

Egbert.—(775-837.) King of Wessex (802-837).
First king of all England (827-837).

Egbert, 10, 237.

Egeria, 10, 394.

Eggleston, Edward.—Born at Vevay, Ind., 1837. A versatile American author and editor of various religious publications. In 1879 he retired from the ministry and devoted himself to literature. His chief works of fiction include, "The Faith Doctor," "The Hoosier Schoolmaster," "The Circuit Rider," "Roxy," and "The End of the World." He also wrote "History of the United States for Schools," a "First Book of American History," etc.

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- Catbird, 4, 114.
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- Common house wren, 4, 121.
- Crow, 4, 115.
- Gambel's partridge, 4, 119.
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- Peacock, 4, 119.
- Pinnated grouse, 4, 117.
- Piping plover, 4, 119.
- Prairie hen, 4, 117.
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- Screech owl, 4, 118.
- Skylark, 4, 120.
- Song sparrow, 4, 120.
- Whip-poor-will, 4, 121.
- Whooping crane, 4, 114.
- Wild pigeon, 4, 119.
- Wild turkey, 4, 120.
- Woodcock, 4, 121.

Egret, White, 4, 224.

Egypt.—A country in northeastern Africa, now a dependency of Turkey. It is bounded on the north by the Mediterranean Sea, east by the Gulf of Suez and the Red Sea, south by Nubia, west by the African Desert. Its soil is very productive, largely due to the inundations of the river Nile. It is composed of fourteen provinces, and is a hereditary vice-royalty, ruled by the khedive, subordinate to Turkey. The prevailing language is Arabic. Area, 380,000 sq. miles; pop. of Egypt proper (up to Wadi Halfa) 1897, 9,734,000. Capital, Cairo (pop., 570,000); chief port, Alexandria (pop., 320,000).

Egypt, 10, 178.

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Egyptian dynasties, 9, 344.

- mythology, 10, 65.
- Religion of, 10, 66.
- The dual control in, 11, 17.
- weights, 13, 220.

Ehrenbreitstein (*ā'ren-brīt' stīn*).—A town in Prussia, on the Rhine opposite Coblenz, noted for its fortress, which is built on a rock 385 feet high. Pop., 5,270.

Eichberg, Julius.—(1824-1893.) A musical composer, who came to America from Germany. He was the director of the Boston Museum orchestra. In 1867 he established the Boston Conservatory of Music.

Eider duck, 4, 110.

Eiffel Tower, 5, 420.

Eight-hour law, 12, 256.

"Eight to Seven," 12, 256.

Eikonogan-Hydrochinon developer, 6, 362.

Eland, or African antelope, 4, 30.

Elasticity, 5, 254.

- of air, 5, 182.

Elaters, 5, 99.

Elba.—An island in the Mediterranean, east of Corsica. It belongs to the province of Leghorn, Italy. Napoleon resided there during a period of exile 1814-1815. It is 18 miles long and has an area of 90 miles. Pop., about 24,000.

Elbe.—A river which rises in Bohemia, flows through Germany and empties into the German Ocean 65 miles below Hamburg. It is

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725 miles long and is navigable for large vessels to Hamburg.

El Caney (*el kă' nă*).—A town 3 miles from Santiago, Cuba. In a battle fought here July 1, 1898, between the United States troops and the Spanish, the former were victorious.

Elder, Box, 4, 408.

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ELECTRICITY, HOW IT IS MEASURED.—

A *Unit* is such an amount of electricity as will, for example, serve to maintain 33 10 candle-power lamps alight for one hour.

The *Volt* is the unit of electrical pressure or electro-motive force. The usual pressure at which electricity is supplied to consumers is 100 volts. The London Board of Trade defines the limits of—

Low pressure	-	-	-	300 volts.
High pressure	-	-	-	3,000 "
Extra high pressure, above	-	-	-	3,000 "

THE AMPÈRE is the unit of current. The amount of current in any conductor at any instant is expressed in ampères.

Example: An ordinary 8 candle-power incandescent lamp glows with three-tenths of an ampère at 100 volts pressure. The usual 2,000 candle-power arc lamp requires 10 ampères at 48 volts pressure.

THE WATT (or VOLT AMPÈRE) is the unit of power on the rate of working.

A WATT IS AN AMPÈRE MULTIPLIED BY A VOLT. 746 watts are equivalent to 1 horse-power, or 33,000 foot-pounds per minute.

Examples: A 2,000 candle-power arc lamp, burning with a current of 10 ampères at a pressure of 48 volts, uses 480 watts (10 ampères multiplied by 48 volts), or about two-thirds of a horse-power. An 8 candle-power incandescent lamp, taking 0.3 of an ampère at 100 volts, absorbs 30 watts.

THE OHM is the unit of resistance. The resistance of conductors is expressed in ohms. The resistance of insulators is expressed in megohms. A megohm is 1,000,000 ohms.

The relation of these units will be understood from the following:—A volt is the pres-

sure that is required to force a current of an ampère through a conductor having the resistance of an ohm.

The resistance of a conductor may be found by dividing the pressure in volts required to send a current through it by that current. Thus the carbon filament of an 8 candle-power lamp, mentioned above, has a resistance of $100 \text{ volts} \div 0.3 \text{ ampère} = 333 \text{ ohms}$.

THE KILOWATT IS 1,000 WATTS. It is equal to $1\frac{1}{2}$ horse-power.

The unit of electrical energy, as already stated, as defined by the Board of Trade, is a kilowatt-hour, that is to say, 1,000 watts for one hour, or 500 watts for two hours, and so on. It will keep 33 10 candle-power incandescent lamps alight during one hour, or it will maintain one arc lamp of 2,000 candle-power for two hours.

INCANDESCENT LAMPS.—It was not until the development of the Dynamo Electric Machine as a means of producing the electric current on a large scale economically that the electric light came to be of commercial importance. Incandescent lighting was not brought to a practical issue till 1879, when Mr. Edison (and almost the same time Mr. Swan) made lamps in which the incandescent conductor was a fine thread or filament of carbon enclosed in a glass globe from which the air was exhausted as completely as possible.

In ordinary use incandescent lamps consume from three or four watts per candle of light, and last for some 1,500 hours. They can be forced to a higher efficiency by increasing the electro-motive force, so that the temperature of the filament is further raised and the light much increased, but this shortens the life of the lamp.

INCANDESCENT *v.* ARC.—The temperature of the filament is in no case so high as the electric arc, hence incandescent lighting is less efficient than arc lighting as regards the proportion of light to power, and the color of the light is more yellow. But, in point of steadiness and pleasantness, facility for distributing light, and convenience in placing and management, incandescent lights have many claims to be preferred for indoor use.

ELECTRICAL INSTRUMENTS AND TERMS.—Rheostat, A., is an instrument invented by Wheatstone, the English physicist, for the comparison of electric resistances. It is sometimes called a "resistance coil," constructed for regulating or adjusting a circuit so that any required degree of resistance may be maintained. It consists of two cylinders, one

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of brass and the other of a non-conducting material, so constructed that by turning a handle a wire can be wound off one cylinder on to the other. A screw thread is cut along the whole length of the non-conducting cylinder, so that the various turns of the wire which is wound on to it are well insulated from each other. Two binding screws are provided for introducing the rheostat wire into a circuit. The resistance thus introduced depends entirely upon the length of wire on the non-conducting cylinder; for as soon as the current passes to the brass cylinder, it leaves the wire and spreads itself over the surface of the cylinder, which offers no resistance to its passage. The resistance introduced can be varied at pleasure by winding the wire on and off the non-conducting cylinder.

ARC LAMPS.—Arc lamps are devices for holding the carbon rods; the carbon points being exposed to the air gradually burn away, a mechanical arrangement becomes necessary and is brought into use to keep the points near together, otherwise the arc would break and the light disappear. Generally the carbons (which are round rods formed by making powdered coke into a paste and baking it), stand in a vertical line, and the upper one is fixed in a heavy holder which tends to slide down until the points are nearly together; the downward motion is checked by mechanism and descends little by little, and only when the length of the arc and the distance between the two carbons has become unduly great.

VOLTAIC (or VOLTA'S) PILE.—What is known as Volta's or the Voltaic Pile is the earliest form of chemical battery devised by Volta, an Italian physicist (1745-1827), who shares with Galvani the honor of having discovered the means of producing an electric current at the expense of chemical action upon one of two united plates of dissimilar metals. Of the two, says the "Century Dictionary" in its definition of the term, the higher credit is due to Volta; consequently *voltaiic* is more commonly used than *galvanic*. The Pile Volta built on an insulated plate, a number of discs arranged in the following order: a disk of copper, one of zinc, and one of cloth, flannel, or pasteboard moistened with acidulated water. This series being repeated a great many times, and arranged in the form of a column, constituted the battery. The series begins with copper and ends with zinc, and the two disks at the extremities are joined by a wire. The current flows from the zinc to the copper through the connecting wire, and in the pile from the

zinc to the cloth and from the cloth to the copper above it.

Electricity, Atlantic cable, 5, 348.

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Morse's inventions in, 5, 337.

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 tusks, 4, 87.

 White, 4, 89.

Elephant and the Bookseller, English fable, 3, 195.

Eleusinia, 10, 96.

Elevation of the Cross, 9, 292.

Elgin.—A city in Ill., on the Fox River, noted for its manufactures of watches, dairy produce, etc. Pop. (1900), 22,433.

Elgin Marbles.—The greater part of the decoration of the Parthenon at Athens. They were taken to England by the Earl of Elgin (1801-03). They are the work of Phidias, about 440 B. C., 3458.

Elgin Marbles, 9, 359.

Elia (*ē'li-ä*).—The name under which Charles Lamb wrote the essays which he contributed to the "London Magazine."

Elias, Mount Saint.—A mountain in Canada near the boundary between it and Alaska.

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- It was once thought to be the highest peak in N. A., but it is surpassed by others in Mexico and Canada. Height, 18,023.
- Elion, 10, 81.**
- Eliot, Charles William.**—Born at Boston, Mass., 1834. He was professor of analytical chemistry in the Mass. Institute of Technology in 1865, appointed president of Harvard College in 1869. His principal work is "A Compendious Manual of Qualitative Chemical Analysis."
- Eliot, George (MARY ANN, or MARIAN, EVANS),** was the pseudonym of Mrs. Cross (1819-1880). A celebrated English novelist.
- Eliot, George, 14, 38, 231.**
- Eliot, Henrietta R.,** "Play with the Limbs" song, 2, 59.
- Eliot, John, 11, 46, 233.**
- Elizabeth of England, 10, 301, 435.**
- Elizabeth Petrovna, 10, 433.**
- Elk, American, 4, 29.**
- Elk Mountains.**—Situated in western Col., of which the highest summit is Castle Peak, 14,115 feet.
- Elkhart.**—A city in Indiana, at the junction of the Elkhart and St. Joseph Rivers. Pop. 15,184.
- Elkins, Stephen Benton, 12, 258.**
- Elkins law, 12, 180.**
- Ellery, William, 11, 85.**
- Ellet, Charles.**—Born at Penn's Manor, Pa., 1810; died at Cairo, Ill., 1862. An engineer, who first introduced the use of wire suspension bridges in America. When acting as colonel in the Union army during the Civil War, by a fleet of Mississippi steamers which he had converted into rams, he sank or disabled several Confederate vessels off Memphis, in 1862. During the action he was mortally wounded.
- Ellet, Charles, 11, 496.**
- Ellicott City.**—A city in Md., on the Patapsco, formerly called Ellicott's Mills; the seat of St. Charles and Rock Hill Colleges, both Roman Catholic. Pop. (1900), 1,331.
- Ellington, Ambrose, 8, 210.**
- Elliott, Charles Loring.**—Born at Scipio, N. Y., 1812; died at Albany, N. Y., 1868. An American artist, elected national academician in 1846.
- Elliott, Jesse Duncan, 11, 233.**
- Elliott, Stephen.**—Born at Beaufort, S. C., 1771; died at Charleston, S. C., 1830; distinguished as a botanist, and author of "Botany of South Carolina and Georgia."
- Elliott, Stephen.**—Born at Beaufort, S. C., 1806; died at Savannah, Ga., 1866; son of Stephen Elliott. He was a bishop of the American Protestant Episcopal Church.
- Elliott, Washington L.**—Born in Pa., 1821. An officer of the U. S. army. At the outbreak of the Civil War he was a subaltern in the 1st U. S. Cavalry; was made colonel of the 2d Iowa Cavalry; served in the west and reached the rank of major-general.
- Ellipse, 7, 283.**
To find the area of an, 13, 151.
circumference of an, 13, 151.
- Ellis, Edward S.,** advice to young authors, 8, 236.
- Ellis, George Edward.**—Born, 1814; died, 1894. A noted Unitarian clergyman, and professor of Systematic Theology in Harvard Divinity School (1857-63). He was the author of "A Half Century of the Unitarian Controversy" and other works.
- Ellsworth, Ephraim Elmer, 11, 496.**
- Ellsworth, Oliver, 11, 233.**
- Ellsworth, William Wolcott, 11, 366.**
- Elm, 4, 454.**
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Slippery, 4, 456.
Weeping witch, 4, 456.
White, 4, 455.
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Witch, 4, 456.
- Elm City.**—A name for New Haven, Conn., on account of the number and beauty of its elms.
- Elmira.**—A city in N. Y., on the Chemung River; noted for its manufactures of iron, etc., and as the seat of Elmira Female College and of the State Reformatory. Pop. (1900), 35,672.
- Elocution, 8, 448.**
Breathing, 8, 449.
Debating club as an educator in, 8, 458.
Declamation, 8, 453.
Gesture, 8, 454.
Oratory, 8, 456.
Preparation, 8, 457.
Quality of the voice, 8, 450.
Vocal inflections, 8, 452.
- El Paso.**—A town in El Paso County, Tex., on the Rio Grande, opposite El Paso del Norte. Pop. (1900), 15,906.
- El Paso del Norte.**—A town in Chihuahua, Mexico, on the Rio Grande opposite El Paso. Pop., about 8,000.
- Elsinore, or Helsingor.**—A seaport town in Zealand, Denmark. A reference is made to it in Shakespeare's "Hamlet." Pop., about 12,000.
- Elston, Susan,** wife of Gen. Lew Wallace, 1, 234.
- Elul, 13, 102,**

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Elves, 10, 120.

Elysian Fields.—A region near the ancient town of Baiæ, Italy, which was especially fertile and beautiful and was thought to resemble the Elysian Fields of Greek mythology.

Elysian Fields, 10, 102.

Elysium.—The resting-place of the souls of the good and of heroes who have been immortalized. It was thought to be a place of exceeding bliss.

Elzevir.—A family of Dutch printers who published editions of the classical authors between the years (1583-1670). They published in all 1,213 works of all kinds.

Emancipation, Proclamation of, 11, 497.

Emanuel I., called "The Great" and "The Happy." King of Portugal.

Embargo.—See JEFFERSON, THOMAS.

Embden goose, 4, 109.

Emerald, Fabled origin of, 1, 193.

May birthstone, 1, 197.

Emerson, Charles Wesley, on Oratorv, 8, 249.

Emerson, Ralph Waldo.—(1803-1882.) A celebrated essayist and lecturer. He was the eighth in succession in a line of Puritan ministers, but left the church as he felt that the restrictions of the pulpit narrowed his expression and teaching. He formed a close and important friendship with Thomas Carlyle. Except when he came out of his retreat at Concord, Mass., to lecture and to speak to the people, he had little intercourse with the world. He is best known by his "Essays," "The Conduct of Life," and the "Oration on the Death of President Lincoln." He was also a writer of verse, which, like his prose is marked by an uplifting and encouraging style, though philosophical and mystic in treatment of subject.

Emerson, Ralph Waldo, Poem on "Brahma," 10, 5.

Letters of, 1, 88.

quoted on Manner, 2, 474.

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quoted on the use of symbols, 2, 183.

Émigrés, Les.—The emigrants who left France in 1789 and later.

Emin Pasha, or Bey.—(EDUARD SCHNITZER). —Born, Germany, 1840. Killed in 1892 by the Arabs. A noted African explorer.

Eminent domain, 12, 258.

Emmet, Thomas Addis, 11, 233.

Emory, William Hemsley, 11, 498.

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Subject to British dictation, 11, 18.

England ceases to grow her own food supply, 11, 14.

leases territory opposite to Hong-Kong, 11, 29.

Expansion of England's colonies, 11, 15.

Empire City.—A name of New York City, as being the financial and commercial metropolis of the Empire State (New York), and of the country.

Empire State.—A name applied to N. Y., because of its leading position with respect to wealth, population, commercial and industrial enterprises.

Empirics.—A regular sect of physicians in the time of Celsus and Galen. Their work was of a professedly practical nature. They did away with theoretical study even of anatomy. The word has come in modern medicine to mean something of the nature of a quack or pretender.

Ems. — (1) A noted watering place in Prussia. (2) A river of Prussia, flowing into the North Sea. Length, 180 miles.

Emu.—A large bird of Australia, incapable of flying but runs fleetly; it is hunted chiefly for the oil which its body contains in large quantities.

Emuckfau (Ala.), Battle of, 11, 234.

Enambuc, or Esnambuc, Pierre Vandroscue Diel d', 11, 57.

Enceladus.—A son of Tartarus and Ge; one of the hundred-armed giants.

Encisco, Adventures of, 11, 37.

Encyclopædia Britannica.—An English "dictionary of arts, sciences, and general literature" first published at Edinburgh (1768-71). The last edition was published in 1888.

"Endeavor," The.—The ship in which Captain Cook set out in 1771 to observe the transit of Venus in southern seas. The expedition was wholly successful and added much to scientific knowledge.

Endicott, John, 11, 57.

Endicott, Rear-Admiral M. T., 12, 179.

Endicott, William Crowninshield, 12, 258.

Endorsement in blank, 7, 476.

to order, 7, 476.

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Endymion.—A youth in ancient Greek mythology, upon whom Zeus conferred the gift of immortality, unfading youth, and everlasting sleep.

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- Endymion**, 10, 93.
- Energy, Measurement of**, 5, 420.
- Enfield**.—A town in Conn., on the Connecticut River; the seat of a Shaker community, and also noted for its manufactures of carpets and powder. Pop. (1900), 6,699.
- Engagement, Announcing an**, 1, 46.
- Engagements**, 1, 46.
- Engineer, Electrical**, 5, 351.
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- Engineers, United States Corps of**, 11, 234.
- Engines, Early attempts at the steam**, 5, 276.
Gas, 5, 273.
Heat, 5, 273.
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Liquid air, 5, 274.
Steam, 5, 273.
- England**.—Takes its name from Angle-land or the land of the Angles, the most powerful of the tribes which went over in 449 under the leadership of Hengist and Horsa. It has an area of 32,610,349 acres and a population (1901), exclusive of Wales, of 30,827,914. It is bounded on the north by Scotland, from which it is separated by the Cheviot Hills and the Solway Firth. It is separated from France on the south by the English Channel and the Straits of Dover; from Ireland on the west by Bristol Channel and the Irish Sea; it has the German Ocean or North Sea on the east. It includes the Isle of Wight, the Isle of Man, and the Channel Islands. The largest cities are London, Liverpool, Manchester, Birmingham, Leeds, and Sheffield. The chief manufactures are cotton, woolen, iron, steel, hardware, leather, etc.
- England after the Normans**, 10, 261.
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- England, John**, 11, 266.
- English fables**, 3, 195.
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- Enoch**, or Idris, Arabic legend of, 3, 228.
- Entangling alliance**, 11, 234.
- Enterprise, The**, 11, 234.
- Entertaining a large number**, 1, 41.
The art of, 1, 41.
- Enthusiasm the Soul of Life**, 14, 18.
- Envelopes**.—In the manufacture of envelopes, the paper is first cut into four-sided pieces, and then a cutting-die cuts these into the shape of an envelope spread out. The folding and gumming is done by machinery. Envelopes were first used in 1839.
- Envoy**.—A diplomatic minister second in rank to an ambassador. An envoy represents only the affairs of a sovereign and not his dignity.
- Enzyms**, 5, 234.
- Eocene epoch**, 5, 466.
- Echippus**, 5, 466.
- Eozoic era**, 5, 462.
- Epaminondas**, 10, 200.
- Ephesus**.—One of the twelve Ionian cities of Asia Minor, on the Cayster River near its mouth in Lydia. A temple of Artemis (Diana of the Ephesians) was founded here in the 6th century B. C.
- Ephesus, Council of**.—(1) A council which was convoked at Ephesus by Theodosius II., Valentinian III., and Cyril of Alexandria, in 431 A. D. At this council the heresy of Nestorius was condemned. (2) The Robber Council held by authority of Theodosius in 449. At this council Eutyches was reinstated and Flavian deposed.
- Ephialtes**, 10, 195.
- Epictetus**.—A stoic philosopher of Hierapolis. He taught that the highest wisdom is to wish for nothing beyond freedom and contentment; that our happiness depends upon our own will; that unavoidable evil in the world is only unreal and apparent. He died about 90 A. D.
- Epicurus**.—(341-270 B. C.) An ancient Greek philosopher who was born on the Island of Samos. He taught that the great evil which afflicted men was fear; that man's chief duty was to get rid of this fear. His idea that pleasure was the chief end has given him a false reputation, on account of the various interpretations of the word "pleasure" among its votaries.
- Epigæa repens**, 5, 10.
- Epiglottis**, 1, 292.
- Epigram**.—Originally among the Greeks the word meant an inscription. It was the Romans who first imparted to this inscription a satirical turn. Martial and Catullus were the best epigrammatists.
- Epirus**.—An ancient district of northern Greece. It was brought up to its greatest height under Pyrrhus (295-272 B. C.). A part of it now belongs to Turkey, and a part was ceded to Greece in 1881.

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E pluribus Unum, 11, 85.

Epping Forest.—A large tract of land in Essex, England, now including 60,000 acres. Formerly it included the whole of Essex, and furnished sport for the ancient kings of England.

Epsom.—A market town near London. From the latter part of the 17th century until about 1736, a fashionable resort because of its famous mineral springs.

Epsom Salts, 5, 210.

Epworth League.—The Young People's Society of the Methodist Episcopal Church, was organized at Cleveland, O., 1889. Its object is "to promote intelligent and vital piety in the young members and friends of the church, to aid them in the attainment of piety and purity of heart and in constant growth of grace, and to train them in works of mercy and of help." It enrolls nearly 2,000,000 members in America. It takes its name from the village of Epworth in England, where John Wesley was born.

Equations, Chemical, 5, 172.

Equator.—An imaginary line passing around the earth equidistant from the poles. The meridians cut it at right angles; and upon it longitude distance E. or W. of the first meridian is measured. The distance around the earth at the equator is 24,499 miles.

Equator, Celestial, 5, 108.

Earth's, 5, 115.

Equinox, Autumnal, 5, 113.

Equinox, Vernal, 5, 112.

Equinoxes.—The two points on the equator where the sun in its apparent course through the heavens crosses. The days and nights at these points are nearly equal. The vernal of spring equinox occurs on Mar. 20; and the autumnal equinox takes place Sept. 20.

Equinoxes, 13, 97.

Equiseta, 5, 464.

Equus caballus, 4, 14.

Era of Good Feeling, 11, 366.

Erasers for drawing, 7, 268.

Erastus, Thomas.—(1524-1583.) A German physician and Protestant disputant.

Erato, 10, 92.

Erebus.—In Greek mythology, the son of Chaos and brother of Nox (Night); a place of nether darkness, through which the spirits of the dead must pass on their way to Hades.

Erebus.—An active volcano in Victoria Land, Antarctic Regions. Height about 12,000 ft.

Ergot, 5, 8.

described, 5, 97.

Eric the Red.—A Norseman who founded a colony in Greenland and sailed down the eastern coast of America in the 10th century.

Ericsson, John, 11, 499; 14, 256.

Erie.—A city and port of entry in Pa., on Lake Erie. It occupies the site of Fort de la Presqu'isle, which was built about 1749. Its chief industry is iron and steel manufactures. Pop. (1900), 52,733.

Erie, Lake.—One of the Great Lakes, lying between Ontario, Canada, on the north, N. Y., Pa., and Ohio on the south and southeast, and Mich. on the west. On its banks are the important cities of Buffalo, Cleveland, Sandusky, and Toledo. Its length is about 250 miles, its average breadth about 40 miles. Area, 9,000 sq. miles and height above sea-level, 573 ft.

Erl-King.—A goblin of German legend, who dwells in the forests and lures people to their death.

Ernst, Col. Oswald H., 12, 179.

Eroica Symphony, The.—The third and greatest of Beethoven's symphonies.

Eros.—In Greek mythology, the god of love.

Erosion of the earth's surface, 5, 428.

Erskine, John.—(1695-1768.) A Scottish jurist. His writings are regarded as an authority in the study of law.

Erskine, Lord, referred to, 14, 46, 84.

Erymanthian boar, 10, 106.

Erysipæa, 5, 97.

Erythroxyton coca, 4, 485.

Esarhaddon, 10, 182.

Escorial.—A palace in Spain, 27 miles northwest of Madrid. It consists of a palace, a monastery, a church, and a mausoleum of Spanish kings. It is celebrated for its library and gallery of paintings. It was erected 1563-84, by Philip II.

Esk.—The name of several rivers of Scotland.

Eskimo dog, 4, 18.

fairy tales, 3, 156.

Esquire, Use of title in addresses, 1, 90.

Essays, Suggested subjects for, 8, 434.

for reading, 8, 516.

Essences, Artificial, 5, 232.

"Essex," The, 11, 234.

Essex Junto, 11, 234.

Essipoff, Madame Annette.—Born, 1850. A noted Russian pianist.

Established Church.—A church maintained and established by a state.

Esterházy von Galantha, Prince Paul Anton von.—(1786-1866.) A notable Austrian diplomatist.

Esterházy, Prince, 9, 113.

Eternity, Hindu idea of, 10, 7.

Ethbaal, King of Tyre, 10, 82.

Ethelred, the Unready, 10, 249.

Ether, 5, 232.

Ethereal salts, 5, 232.

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Ethers, The, 5, 232.

Ethics, Training in, 2, 127.

Ethiopia.—An ancient division of Africa, extending from Egypt to Khartum. It is now held by the Abyssinians and Mahdists.

Ethmoid Bone, 1, 273.

Ethyl Alcohol, 5, 230.

Ethylene, 5, 229.

Ethyl nitrate, 5, 232.

Étienne (*ā-tyer'*), **Charles Guillaume**.—(1778–1845.) A French dramatist, poet, and journalist.

Etna.—In Sicily, the highest volcano of Europe; height 10,835 ft.

Eton College.—One of the famous educational institutions of England. Henry VI. founded it in 1440.

Etruria.—A division of Italy, in ancient geography, which extended along the Mediterranean. It corresponds very nearly to the modern Tuscany.

E-tsung, 10, 153.

Etty, William, 9, 285.

Eucalyptus.—A genus of trees mostly native to Australia. They grow to great size, sometimes 8–16 ft. in diameter; and a plank 148 feet long was shown at the exhibition at Crystal Palace, London, in 1851. They yield an essential oil called eucalyptol, which is used for an antiseptic dressing.

Eucalyptus Tree, 5, 2.

Euclid.—A famous Greek geometrician who lived at Alexandria about 300 B. C. His works comprising the "Elements of Geometry" form the basis of text-books to the present day.

Eugene, Prince (FRANÇOIS EUGÈNE DE SAVOIE-CARIGNAN).—(1663–1736.) An Austrian general who took part in the war of the Spanish Succession. He coöperated with Marlborough at Oudenarde, Lille, and Malplaquet.

"**Eugene Aram**."—The title of a novel by Bulwer-Lytton, published in 1832.

Eugenia Pimenta, 5, 50.

Eugénie (EUGENIA MARIA DE MONTIJO DE GUZMAN, Countess of Teba).—Born in Spain, 1826. Wife of Napoleon III.

Eugenie, Empress of France, 10, 429.

Eumæus, 3, 385.

Euphrates.—A great river of Mesopotamia.

Eureka.—(1) A town in Nev., noted for its silver and lead mines. Pop. (1900), 785. (2) A seaport city in Cal. on Humboldt Bay. Pop. (1900), 7,327.

Euripides.—(480–406 B. C.) An Athenian tragic poet.

Europa, or Europe.—In Greek mythology, daughter of Phoenix, and mother, by Zeus, of Minos and Rhadamanthus.

Europa, 10, 87.

Europe.—The smallest grand division of the Eastern Continent. Bounded on the north by the Arctic Sea; east by the Ural Mountains, the Ural River, the Caspian Sea, and the Kara River; south by the Mediterranean Sea, the Black Sea, and the Sea of Marmora; west by the Atlantic Ocean. Length, northeast and southwest, 3,400 miles; breadth, north and south, 2,400 miles; estimated area, about 3,550,000 sq. miles. Its coast line is longer in proportion to its size than that of any other great natural division of the globe, estimated at about 19,500 miles. It is the most highly civilized and most populous of the grand divisions of the Old World. Pop., about 380,000,000.

Europe after Napoleon, 10, 354.

the Middle Ages, 10, 287.

during the nineteenth century, 10, 354.

sixteenth century, 10, 306.

Early migration into, 10, 233.

Foundation of modern, 10, 242.

Population of, in the nineteenth century, 13, 331.

European goldfinch, 4, 184.

white pelican, 4, 216.

Eurydice.—(1) Wife of Amyntas II., king of Macedonia. (2) In Greek mythology, the wife of Orpheus.

Eurydice, 10, 92.

Eurylochus, companion of Ulysses, 3, 380.

Eurymachus, 3, 385.

Eurystheus, 10, 106.

Eusebius of Cæsarea.—(264–349.) An ancient theologian and writer of ecclesiastical history. He has been called "The Father of Church History."

Eustis, James Biddle, 11, 505.

Eustis, William, 11, 235.

Eutaw Springs (S. C.), **Battle of**, 11, 85.

Euterpe, 10, 92.

Evangelical Alliance, The.—An association of Christians, which was formed in London in 1846, with the object of bringing about harmony and intercourse between the different sects of Christians.

"**Evangeline**," History of, 8, 298.

"**Evangeline**."—The title of a poem by Longfellow, published in 1847.

Evans, Augusta J. (MRS. WILSON).—Born, 1838. An American novelist.

Evans, Dr., helps Empress Eugenie to escape, 10, 429.

Evans, Oliver, 11, 235.

Evanston.—A town in Ill., on Lake Michigan; the seat of the Northwestern University of Garrett Biblical Institute and of the Evanston College for Women. Pop. (1900), 19,259.

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Evansville.—A city in Ind., on the Ohio River.

It is chiefly noted for its extensive manufactures of tobacco, and is an important shipping point. Pop. (1900), 59,007.

Evaporation, 5, 156, 270.

Part played in nature by, 5, 161.

Evarts, William Maxwell, 12, 258.

Eve, Creation of, Arabic legend, 3, 216.

"Evelina."—The title of a noted novel by Madame d'Arblay (Frances Burney) published in 1778.

Evelyn, John.—(1620–1706.) An English author who took an active part with the Royalist forces in the civil war in England. His "Memoirs" which contains his diary throw great light upon the history of his time.

Evening grosbeak, 4, 188.

primrose, 5, 19.

Everett, Edward, 12, 259; 14, 110.

Everglades.—An unreclaimable bog in southern Florida.

Evergreen.—A pseudonym of Washington Irving, under which he wrote "Salmagundi."

Evil-Merodach Neriglassar, 10, 182.

Evolution.—A continuous progress from the unlike to the like, from the simple to the complex, as applied to all forms of life. This doctrine is taught by Herbert Spencer and by Charles Darwin.

Evolution, Darwin's theory of, 4, 9.

Wallace's contributions to, 4, 10.

Ewell, Richard Stoddard, 11, 505.

Ewing, Thomas, 12, 259.

Exarchs of Ravenna, 10, 259.

Excelsior Geyser.—A geyser in Yellowstone Park, Wy., noted as being the largest in the world, throwing up a column of water from 200 to 300 feet in height.

Exchange, Bill of, 13, 38.

Exchequer, 13, 117.

Excise, 12, 259; 13, 117.

Excise laws, 12, 259.

Executive, 12, 259.

sessions, 12, 260.

Executive Department.—The Executive department of the U. S. Government comprises the following subordinate departments: (1) State, which administers foreign affairs; (2) Treasury, which has charge of the finances; (3) War, which administers military affairs; (4) Navy, which has charge of naval affairs; (5) Interior, which has charge of matters pertaining to home affairs, including public lands, Indians, patents, pensions, education, railroads, and the census; (6) Justice, which is the legal counsel of the Government; (7) Post Office, which has charge of the mail service;

(8) Agriculture, which collects and disseminates information on agricultural subjects.

Executive Mansion.—The President's official residence at Washington, D. C. It is built in the English Renaissance style of architecture, with a projecting columned and pedimented porch at the front entrance, and a large semi-circular projecting wing on the garden front opposite. The corner stone was laid by Washington in 1792, and it was first occupied by President John Adams, in 1800. It stands on Pennsylvania Avenue, slightly over a mile from the Capitol, and is surrounded by about 20 acres of handsomely laid-out grounds. The Executive Mansion is two stories high, 176 ft. long, 86 ft. wide, and is built of freestone, painted white. From the latter circumstance it is familiarly known as the White House. When the British captured Washington, in 1814, the Executive Mansion, together with other buildings, was burned. Congress authorized its restoration in 1815, which was completed in 1818, and it has been occupied by the successive Presidents since that time.

Exequatur, 12, 260.

Exercise for the child's limbs, 2, 58.

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for the abdomen, 6, 24.

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legs, 6, 22.

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shoulders, 6, 21.

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Grasshopper jumps, 6, 24.

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chest weights, 6, 30.

rings, 6, 40.

the double inclined poles, 6, 41.

inclined ladder, 6, 43.

vertical rope or pole, 6, 44.

wand, 6, 32.

wooden dumb-bell, 6, 28.

Exeter.—A town in N. H., on the Exeter River, the seat of Phillips Academy. Pop. (1900), 4,922.

Exhibitions, 12, 261.

Exmoor.—A moorland region of England; the scene of Blackmore's novel "Lorna Doone." Noted for its breed of ponies.

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Exodus.—The name given to the departure of the Children of Israel from Egypt. The word literally means "a going-out."

Expansion by heat, 5, 267.

Expatriation, 12, 261.

Expedition, Fremont's, 11, 376.

Expenditures, Public, 12, 261.

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Ex post facto law, 12, 261.

Expression as a means of developing character, 8, 109.

Expunging resolutions, 11, 366.

Extensor communis digitorum, 1, 276.
muscle, 1, 274.

Extraditional, International, 12, 262.

Eyck, Hubert van.—(1366-1426.) A Flemish painter.

Eyck, Jan van.—(1386-1440.) A Flemish painter.

Eye, Structure of the, 5, 302.

Eylau.—A town of Prussia near Königsberg; the scene of a battle in 1807 between the French under Napoleon and the Russians and Prussians under Bennigsen and Lestocq.

"Eyre, Jane."—A famous novel by Charlotte Brontë, published in 1847.

Ezra, 10, 184.

Ezra Church (Ga.), Battle of, 11, 505.

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Fabius Maximus, 10, 213.

Fables, by Epiphanius Wilson, 3, 165.

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Fænza, Majolica factories at, 1, 218.

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ferruginea, 4, 435.

Fahrenheit thermometer, 5, 268.

Faïence ware, 1, 215.

Fairbanks, Charles Warren, elected Vice-president, 12, 182.

Sketch of, 12, 262.

Fairbanks, Erastus.—(1792-1864.) The inventor of the Fairbanks scales (1831).

Fairchild, Lucius.—(1831-1896.) A volunteer soldier, statesman, and diplomat.

Fairfield.—A town in Conn., on Long Island Sound, burned by Tryon in 1779.

Fairmount Park.—A large park in Philadelphia. It was the site of the Centennial Exhibition in 1876.

Fair Oaks (Va.), Battle of, 11, 506.

Fairy tales, by Ginevra Ingersoll, 3, 13.

Arabian, 3, 25.

Fairy tales—Continued.

Austrian, 3, 102.

Bibliography of, 3, 161.

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Danish, 3, 142.

English, 3, 112.

Eskimo, 3, 156.

French, 3, 65.

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Hindu, 3, 17.

Icelandic, 3, 154.

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North American Indian, 3, 157.

Polish, 3, 46.

Portuguese, 3, 61.

Russian, 3, 40.

Scotch, 3, 125.

Servian, 3, 48.

Spanish, 3, 59.

Swedish, 3, 138.

Welsh, 3, 130.

Falcon, 4, 138.

Hunting by the, 4, 139.

Peregrine, 4, 139.

Falconer, 4, 139.

Falguière, Jean Alexandre, 9, 401.

Falkland Islands.—In the South Atlantic Ocean, a group of islands belonging to Great Britain. They are situated 300 miles east of

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Magellan Straits, and consist of about 1,000 small islands. The total area is about 7,500 square miles; population (1905), 2,009. The chief town is Stanley, population, 916.

Falling bodies, Acceleration of, 5, 257.

Law of, 5, 256.

Falling Market, 13, 117.

Fallows, Samuel, 11, 506.

Fall River.—A city and port of entry in Mass., at the mouth of the Taunton River; noted for its extensive manufactures. Pop. (1900), 104,863.

False Solomon's Seal.—2920.

Falstaff, Sir John.—A character in Shakespeare's "Henry IV." and in "The Merry Wives of Windsor."

Family Compact.—A series of three treaties between the French and Spanish Bourbons, more especially the last of the three made in 1761, by which Spain joined France in war against England.

Faneuil, Peter, 11, 57.

Faneuil Hall.—A historic building in Boston.

Fanning, Edmund.—(1737-1818.) A Tory leader who distinguished himself in the Revolutionary War.

Fantail pigeon, 4, 112.

Faraday, Michael.—(1791-1861.) An English physicist and chemist.

Faraday, Michael, 8, 58; 13, 266; 14, 95, 225.

Farewell Address, 11, 235.

Fargo.—A city in N. D., on the Red River of the North, a large trading and manufacturing center. Pop. (1900), 9,589.

Fargo, William George (1818-1881), was the founder of several express companies, beginning with a "pony" express across the plains to Cal.

Farm machinery perfected by McCormick, 5, 287.

Farmer's Alliance, 12, 262.

FARM NOTES.—

The average daily consumption of hay in the New York market has amounted to 1,000 up to 1,200 tons. 20,400,000 tons of forage are consumed each year. Of this fully two-thirds must be grown on the farm in the form of hay, stover, silage, pasturage, clovers, etc.

A milch cow of 1,000 pounds consumes about $4\frac{1}{2}$ tons of dry fodder in one year. The first requisite in starting a permanent meadow is to have the land in good condition.

A good meadow ought to last from four to six years and yield an average of three or four tons of hay per acre each year.

In preparing a field for grass, all stirring, mixing, and opening of the soil must be done before the seed is planted.

All weeds must first be gotten rid of, as there is no satisfactory way of cleaning weeds out of a meadow except that of breaking up the sod and re-seeding.

A fall seeding is most desirable.

The field should be gone over twice, in two directions, using half the quantity each time. This will secure an even seeding.

The use of the roller is very important. The packing of the dirt around the seed insures a higher percentage of germination. Seeds require sufficient moisture and an even temperature to make their best growth.

The most commonly cultivated grasses in the eastern United States are timothy, orchard grass, or June grass.

All kinds of farm stock enjoy a varied ration, and the grazing will be more relished and more nutritious when the meadow consists of several kinds of grass.

For destroying weeds reproducing themselves from seeds only, prevent the production of seeds.

The seeds often retain their vitality for years.

FEEDING OF FARM ANIMALS.—An ox standing in the stall requires less food nutrients than one which is working hard every day.

The cow requires not only materials for maintenance but must also have protein, fat, and carbohydrates to make milk from.

The cow must not only have a generous supply of good food but it must contain sufficient amount of the nutrient needed for making milk. If the supply of proper materials is small, the output will be small.

The cow that will not repay generous feeding should be disposed of at once and one bought that will.

A common practice of fattening steers in the South is to feed 15 to 24 pounds of cotton-seed hulls and 6 to 8 pounds of cotton-seed meal. Experience has proved the value of wheat as a feed for all kinds of stock.

One hundred pounds of wheat furnishes more real nutriment than a similar amount of any other grain.

When, as recently, 60 pounds of wheat sells for less than 56 pounds of corn, the economy of wheat is apparent.

To guard against danger from indigestion, and to utilize wheat to the best advantage, it should be fed with other grains.

Whole wheat has been found the cheapest feed for sheep.

For horses wheat should be coarsely ground and fed on moistened hay, alone, or with bran,

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Farm Notes—Continued.

For cows it is well to crush or coarsely grind wheat mixed with bran.

A ration recommended is 6 to 8 pounds of bran and 6 pounds of wheat.

For young pigs wheat may be fed with a little corn with good results.

Ground wheat may be mixed with corn and shorts and made into a slop.

Breeding ewes need not be fed more than twice daily.

Turnips are much preferred for sheep feeding, being relished by them.

Sugar beets are satisfactory if fed to sheep in small quantities.

For feeding lambs to be used for breeding purposes, preference should be given to bran, oats, and linseed meal.

Corn meal tends to fatten, but does not produce growth to the same extent as other foods.

In rearing lambs that have lost their mothers, or when the latter do not give enough milk to nourish the lambs properly, it is best to feed cows' milk from a bottle that has a small rubber nipple attached to it.

The lambs like the milk hot and thrive better on it.

For fattening lambs for early market, corn meal is the leading food.

Sheep of all kinds and ages are fond of bran.

SOME FACTS ABOUT DAIRY CATTLE.—Unless it be the little Irish Kerry, there is no cow which excels the Ayrshire in obtaining subsistence and doing well on scanty pasture, and giving a dairy profit upon the coarsest of forage.

The Ayrshire lives to serve dairy interests with the utmost economy in the utilization of food.

Like all other good dairy cattle, the Ayrshire responds promptly and profitably to liberal feeding. The Ayrshire cow is a large and persistent milker.

The milk of the Ayrshire is not exceptionally rich, but somewhat above the average.

The Ayrshire is not a first-class butter cow, but its milk is admirably suited for town and city supply.

Brown Swiss cows yield a generous flow of milk and hold out well.

Good specimens may be expected to give an average of 10 quarts for every day in the year.

The quality of milk is above the European average.

Ordinarily, 22 pounds of the milk of this breed will make one pound of butter.

These cattle are good for beef as well as for dairy.

Devons thrive on meagre pasturage.

Devon cows do not yield large quantities of milk and are not persistent milkers.

The milk of this breed is rich in quality, being well above the average milk of the dairy cows of the country.

The friends of this breed regard it as more particularly a beef producer.

The calves are always fat and lusty, showing a vigorous growth.

The beef is fine-grained, usually tender, and well marbled, and the fat of a deep yellow color.

Dutch Belted are docile beasts, fairly hardy, vigorous in growth and action.

As milk producers they seem to give good satisfaction, although the milk is not above the average in quality.

Guernseys produce liberal quantities of milk, and it is of uncommon richness in butter and fat and in natural color.

They are especially recommended for butter cows, as well as for market milk.

The average Guernsey cow is expected to produce 5,000 pounds of milk and 300 pounds of butter in a year without high feeding.

This average is very often larger.

One cow has given 48 to 52 pounds of milk a day and over 800 pounds of butter per year.

Holstein-Friesians are very large feeders and at the same time dainty about their eating.

To do their best they must be given an abundance of rich food, without the necessity of much exertion to get it.

The breed is famous for enormous milk-producers.

Cows giving 5 to 7 gallons of milk per day are regarded as average animals.

The milk of these large producers is generally pretty thin.

The cows have been favorites of dairymen doing a milk supply business, but in numerous cases their product has been below the standards fixed by state and municipal laws.

Jerseys are the smallest in size of the noted dairy breeds.

Jerseys have been bred especially and almost exclusively for butter.

Two, three, and four gallons of milk per day are common yields of this breed.

They are noted for persistence in milking, making a long season of profit.

Good cows are depended upon to produce 350 to 400 pounds of butter per year.

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Farm Notes—Continued.

Several tests with single animals have resulted in 600, 700, 800, and even 1,000 pounds of butter within twelve months.

Jerseys are heavy feeders.

They have great capacity for assimilating and turning to profit all kinds of cattle forage.

The Jersey cow is principally a machine for producing milk — butter-making milk.

Polled Durham is the only breed of cattle which has originated in America.

Polled Durhams are bred principally for beef production.

They are regarded as "general purpose" cattle.

In several instances they have been found to be somewhat above the average in milk supply.

Red Polls are placed in the second class as dairy animals.

They give rather more milk than Devons on the average, but not quite so rich in quality.

A single selected cow gives 30, 40, and sometimes 50 pounds of milk a day.

The tendency in this country is to improve the beef-producing capacity at the expense of dairy qualities.

Shorthorns are probably the largest in point of size among pure breeds of cattle.

Bulls ordinarily weigh a ton or more, sometimes running up to 3,000 pounds.

Shorthorns when first brought to America earned the name of "the milk breed."

From old records we find that cows of this breed have given 6, 8, and even 9 gallons of milk a day on grass alone.

The Shorthorn's milk is of good quality, rather above the average.

Single cows have records of 400 pounds of butter a year and over, one yielding 513 pounds.

Normandies belong to the "general purpose" class of cattle, being as good for beef as for dairy purposes.

Cows have been known to yield 7,000 to 8,000 pounds of milk per year.

They have produced over 300 pounds of butter annually.

These cattle can be almost entirely cared for by women, being very quiet and easily managed.

They are hearty feeders, and not dainty about their food.

As a matter of ordinary business prudence, every dairyman should study the individuality of his cows.

A record of quantity and quality of milk product should be kept.

A room open to the roof, which is fairly high, is better than a low level ceiling above the cows.

The most important point in selecting animals is to get perfectly healthy stock.

Close confinement, with impure air and lack of exercise, is prejudicial to the health of milch cows.

Exposure to storms and cold is equally injurious to the health and profit of cows.

Every member of a herd should pass under the critical eye of the owner or his trusted assistant daily, preferably twice a day.

Calves born in the fall are easier reared, better cared for, and make finer cows than those born in the spring or summer.

Cows need much water.

Keep dairy cattle in a room or building by themselves. It is preferable to have no cellar below and no storage above.

Stables should be well ventilated, lighted, and drained; should have tight floors and walls, and be plainly constructed.

Whitewash the stable once or twice a year; use land plaster in the manure gutters daily.

Clean and thoroughly air the stable before milking.

Keep the stable in good condition.

Have the herd examined at least twice a year by a skilled veterinarian.

Promptly remove from the herd any animal suspected of being in bad health and reject her milk.

Do not move cows faster than a comfortable walk while on the way to the place of milking or feeding.

Never allow the cows to be excited by hard driving, abuse, loud talking, or unnecessary disturbance.

Do not change the feed suddenly.

Feed liberally, and use only fresh palatable feed stuffs; in no case should decomposed or moldy material be used.

Provide water in abundance, easy of access, and always pure; fresh, but not too cold.

Salt should always be accessible.

Do not allow any strong-flavored food, like garlic, cabbage, and turnips, to be eaten, except immediately after milking.

Clean the entire body daily. If hair in the region of the udder is not easily kept clean, it should be clipped.

Farms in the United States, 13, 336.

Farmville (Va.), **Battle of**, 11, 506.

Farnese (*fär'nā'-se*).—An important family of Italy, who built a palace at Rome partly under the direction of Michelangelo. There they

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gathered about them a great number of works of art, which have since been distributed throughout Europe. So we have the "Farnese Bacchus," the "Farnese Bull," "Flora," "Hercules," "Homer, Juno" and "Minerva."

Faroe.—A group of Danish Islands between the Shetlands and Iceland in the Atlantic, belonging to Denmark. They number 24, of which 17 are inhabited.

Farragut, David Glasgow, 11, 507.
referred to, 14, 95, 255.

Farrar, Frederic William.—(1831- .) An English clergyman, writer, theologian, and educator. He was made canon and arch-deacon of Westminster in 1883, and dean of Canterbury in 1895.

Farrar, Canon, on education, 8, 199.

Far Rockaway.—A bathing-place on the south side of Long Island, 14 miles from New York. It became a part of Greater New York (Jan. 1, 1898).

Farthing, 13, 162.

Farwell, John V., on "Getting a Position and Keeping it," 13, 72.

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Father, Legal duties of a, 13, 308.

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Vanity, 2, 276.
Weakness, Consciousness of, 2, 250.

Faun, The Marble, 9, 363.

Faunus, 10, 104.

Faure, Jean Baptiste.—(Born, 1830.) A celebrated French vocalist and composer. His baritone voice has been heard to greatest advantage in the character of Mephistopheles, in "Faust."

Faust (foust), or Faustus, Doctor Johann.—A magician, soothsayer, and astrologer who

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- lived in Germany in the 16th century. He is the subject of Goethe's tragedy.
- Faust, Damnation of**, 9, 93, 94.
- Fawcett, Edgar**, Advice to young authors, 8, 231.
- Fawcett, Henry**, the blind postmaster-general of England, 8, 25.
- Fawkes, Guy**.—(1570-1606.) The chief conspirator of the Gunpowder Plot, Nov. 5, 1605.
- Fawn**, 4, 27.
- Fayal** (*fi-al*).—One of the Azores Islands, belonging to Portugal. The capital is Horta. The chief exports are oranges.
- Fear**, 2, 224.
 Power of, 8, 177.
 not to be excited in children, 2, 460.
- Fear, Cape**.—A promontory forming part of Smith's Island, N. C. Its entrances were blocked during the Civil War.
- Feather Grass**.—A genus of grasses having very long awns; found generally in a warm temperate climate.
- Feathers, Structure of**, 4, 95.
- February**, 13, 97.
- February, Revolution of**.—In France, the revolution of 1848, which commenced on the 23d of Feb.
- Fechter, Charles Albert**.—(1824-1879.) A noted actor.
- Federal Constitution**, 11, 85, 150.
- Federalist, The**, 11, 85.
- Federalist Party**, 11, 86.
- Feldspar**, 5, 442.
- Félibres, Les**.—The name of an extensive organization of modern Provençal poets. Originated in 1835 by Joseph Roumanille.
- "Felix Holt, the Radical"**.—A novel by George Eliot.
- Felix I**.—Bishop of Rome (269-274).
- Fellahs, or Fellahin**.—The great agricultural class of Egypt.
- Fellowship in a University**.—In the universities of Oxford and Cambridge, these are gifts conferred upon such students as are found worthy after they have taken the degree of B.A., or made progress in civil law.
- Felo de se**, 12, 262.
- Femur**, 1, 274.
- Fencing**, 6, 114.
- Fenians**, 11, 366.
- Fennel**, 5, 59.
- Fennel-water**, 5, 59.
- Fenri's Wolf**, 10, 127.
- Feodor I. Ivanovitch**.—(1557-1598.) Czar of Russia (1584-1598).
- Feodorovitch, Michael**, 10, 328.
- Ferae or flesh-eating mammals**, 4, 11.
- Ferdinand I**.—(1379-1416.) "The Just." King of Aragon (1412-1416).
- Ferdinand I**.—(1793-1875.) Emperor of Austria (1835-1848).
- Ferdinand I**.—(Died, 1065.) "The Great." King of Castile and Leon.
- Ferdinand II**.—(Died, 1188.) King of Leon (1157-1188).
- Ferdinand III**.—(1200-1252.) "The Saint." King of Castile and Leon.
- Ferdinand IV**.—(1285-1312.) King of Castile and Leon (1295-1312).
- Ferdinand V**. (II. of Aragon and Sicily and III. of Naples).—(1452-1516.) "The Catholic." King of Castile (1474-1516).
- Ferdinand VI**.—(1712-1759.) King of Spain (1746-1759).
- Ferdinand VII**.—(1784-1833.) King of Spain (1808-1833).
- Ferdinand I**.—(1553-1564.) Emperor of the Holy Roman Empire (1556-1564).
- Ferdinand II**.—(1578-1637.) Emperor of the Holy Roman Empire (1619-1637).
- Ferdinand III**.—(1608-1657.) Emperor of the Holy Roman Empire (1637-1657).
- Ferdinand I**.—(1424-1494.) King of Naples (1458-1494).
- Ferdinand II**.—(1469-1496.) King of Naples (1495-1496).
- Ferdinand I**.—(1345-1383.) King of Portugal (1367-1383).
- Ferdinand II**.—(1816-1885.) King of Portugal. Regent (1853-1855).
- Ferdinand I**.—(1751-1825.) King of the Two Sicilies (1759-1825).
- Ferdinand II**.—(1810-1859.) King of the Two Sicilies (1830-1859).
- Ferdinand of Aragon**, 10, 280.
- Fergus**.—A mythical king of Scotland.
- Ferguson, Adam**.—(1723-1816.) A noted Scottish philosopher and historian; for some years professor in Edinburgh University.
- Fermentation, Alcoholic**, 5, 234.
 Chemistry of, 5, 234.
 Lactic, 5, 235.
 Wort, 5, 236.
- Fermi, Dr. C.**, on the destruction of mosquitoes, 4, 357.
- Fern, Fanny**.—The pseudonym of Mrs. Sara Payson Willis, a popular writer of her time.
- Ferns**.—The fern is a leafy plant, throwing upward a stem, which, in the species that grows on trees, often reaches from 25 to 30 feet in length. In other varieties, the plants are less than one inch in height.
 If one searches for ferns, early in March, a little evergreen may be discovered. In April, the woolly croziers, or fiddleheads, appear, and

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Ferns—Continued.

quickly develop into the luxuriant plant found on low wet ground, and along roadsides. Early in May, the Osmundae reach a good state of development; the Royal fern is to be found, delicate and fleshy, in wet meadows. In the open wood, or along roadsides, the Interrupted or Cinnamon fern is found. The three plants described above soon reach maturity and correspond to one another in size, and in the appearance of their flower-like fruit clusters.

The Fragile Bladder fern is to be searched for on rocky banks, and among the spreading roots of some forest tree. It soon unrolls little fronds on which fruit dots appear.

Several of the Rock Spleenworts are ever-green. Their ordinary diminutive stature is quickly dwarfed by cold weather, and the plant is seldom encountered in winter walks in the woodland. A number of the Shield ferns endure until spring.

Even in the middle of January, the keen-eyed fern hunter may hope to make some discoveries as to the haunts and habits of his favorites.

In the cultivation of ferns, a compost of peat or bog earth, with decayed leaf mold, yellow loam, and silver sand, in equal proportions, should be used when the ferns are potted. All must be well underdrained. Fragments of mortar, and limestone, in the compost would prove dangerous to growth.

There is sufficient proof in ancient history to show that ferns were growing in abundance centuries ago. A poet spoke of the falling of the fern seed on the night St. John was born. Collections of the various species were practically commenced in 1628, when Mr. John Tradescant returned to England from a trip to Virginia. He took back with him many new kinds of ferns. Rear-admiral Bligh carried home from the West Indies, where he had sailed in the interests of the breadfruit culture, thirty-seven species of the fern. In 1813, one-half of the known ferns were growing in the West Indies and in North America.

In the numerous isles of the Pacific Ocean, some of the most magnificent ferns of the world grow. The island of Mauritius has produced two hundred and thirty-five native species; Java claims four hundred and sixty; Brazil, three hundred and eighty-seven, and the Isthmus of Panama, one hundred and seventeen. Compared with these results in warm climates, there appear annually within the borders of the Arctic zone, twenty-six species of ferns.

The general character of the plant is much

the same all over the world. Members of the species distinct from the Tree fern, grow to a height of from one inch to six or seven feet. Some are stout and fleshy, others are delicate and filmy, but nearly all are herbaceous, resembling ordinary flowering plants in texture of foliage. In structure, the plants vary greatly. Some have fronds rising from different portions of the rootstick; others are tufted—for instance the Ostrich ferns. Some grow in crowns, with fronds continually rising from the older ones.

One of the most interesting species of fern is the Aquatic, the sterile fronds of which float about in the shallow waters of southern Florida.

A few species are epiphytic, growing on other plants. In tropical countries, ferns have been found growing on trees at a height of two hundred feet.

Another species may have different sizes of fronds, according to the character of climate and soil. The Lady fern, which in ordinary localities grows from two to four feet high, has in mountainous regions reached only a height of a few inches. In the Northern States of this country, some specimens are produced in May, others as late as September.

In flowering ferns, the Osmundas kind includes some of the largest and coarsest specimens. In rich woods, somewhat moist, may be found a few Spleenworts, most of the Shield ferns, the Beech, Grape, Maidenhair, and some others. In such a situation are found the finest development of fern foliage. On dry cliffs, the Woodsia species may be looked for; the cloak ferns, lip-ferns, and cliff-brakes. Many of these are leathery in texture; others are thickly covered with tangled hair or scales.

Somewhat in the nature of a surprise it would be for a resident of the continental portion of the United States to receive an invitation, when on a visit to a fellow-citizen in the newly-acquired Hawaiian territory, to come out into the woods and have a feast of roast ferns. It is a fact, however, that the ferns in those islands have been cooked, and found palatable. Without salt, they are found tasteless and possess a sort of leatheriness. In past times, the stems of the Tree fern were sometimes cooked in the steaming cracks of volcanoes. The bases of the petioles of another species have been cooked and eaten in times when there was a scarcity of other food. When raw, these smelled precisely like raw potatoes.

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- Cinnamon, 5, 79.
- Collecting, 4, 404.
- Cultivation of, 5, 79.
- Fiddleheads, 5, 79.
- Flowering, 5, 80.
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- Lady, 5, 80.
- Mauritius varieties, 5, 79.
- Osmunda, 5, 79.
- Ostrich, 5, 80.
- Rock spleenwort, 5, 79.
- Royal, 5, 79.
- Shield, 5, 79.
- To mount, for study, 4, 403.
- Tree, 5, 79.
- Varieties of, 5, 79.
- Ferrara.**—(1) A province of northern Italy, on the Adriatic Sea. (2) The capital of the province of Ferrara. Pop. (1899), 91,259.
- Ferrari.**—(1484-1546.) An Italian painter.
- Ferrel, William.**—(1817-1891.) Distinguished as a meteorologist. Inventor of a maxima and minima tidal predicting machine.
- Ferrers, George.**—(1500-1579.) An English politician and poet.
- Ferret.**—An animal of the weasel family; it was employed in ancient times, as it is now, in catching rabbits. Can be in a measure domesticated.
- Ferric compounds,** 5, 221.
- Ferrier, Susan Edmonstone.**—(1782-1854.) A noted Scottish novelist.
- Ferrous compounds,** 5, 221.
- Fertilization of flowers,** 4, 398.
- Fertilizers, Artificial,** 5, 209.
- Fesca Friedrich Ernest.**—(1789-1826.) A German composer and violinist.
- Fescue grass,** 5, 82.
- Fessenden, William Pitt,** 12, 262.
- Fetich Worship.**—“Fetich” is a word of Portuguese origin and was the expression of the idea among Portuguese navigators of the worship of the natives of the west coast of Africa with whom they traded. It is an object to which a magical influence is attributed, as stones, carved images, parts of animals. The fetich is an idol and the worship is idolatry.
- Fétis, François Joseph.**—(1784-1871.) A Belgian composer and writer on music.
- Feudal Laws.**—The laws in vogue in the Middle Ages, relating to the holding of land, whereby the tenant held the property and made return to his lord in military service in time of war. They were introduced into England by William the Conqueror.
- Feudal system,** 10, 253.
- Feuillet, Octave.**—(1821-1890.) A noted French novelist and dramatist.
- Fever Blisters, Treatment of,** 1, 343.
- Fewkes, J. Walter,** on American Indian folklore, 10, 128.
- Fez.**—(1) A sultanate in northern Morocco. (2) The capital of Morocco; pop., 140,000.
- Fiat money,** 13, 162.
- Fibula,** 1, 274.
- Fichel, Benjamin Eugène.**—(1826-1895.) A French painter of genre.
- Fichte, Johann Gottlieb.**—(1762-1814.) A celebrated German metaphysician.
- Ficus indica,** 4, 467.
- Fidei Defensor,** 10, 301.
- Fidelio.**—The only opera composed by Beethoven; first produced in Vienna, 1805.
- Field, Cyrus W.,** 5, 346.
referred to, 14, 26, 163, 356.
- Field, David Dudley.**—(1805-1894.) A noted American lawyer and jurist.
- Field, Eugene.**—(1850-1895.) A journalist and poet.
- Field, John.**—(1782-1837.) A noted British composer and pianist.
- Field, Marshall,** on success in life, 8, 122.
- Field, Stephen Johnson.**—(1816-1899.) A noted American jurist.
- Field, Stephen Johnson,** 13, 263.
- Field Codes,** 11, 367.
- Field lark,** 4, 174.
plover, 4, 129.
sparrow, 4, 172.
- Fielding, Copley,** 9, 284.
- Fielding, Henry.**—(1707-1754.) A celebrated English novelist and dramatist.
- Field of the Cloth of Gold.**—In France, a plain near Ardres, Pas-de-Calais, which was the scene, in 1520, of the meeting between Henry VIII. of England and Francis I. of France. The great splendor of the display on this occasion gave the name to the spot.
- Fields, James Thomas.**—(1817-1881.) A man of letters, a member of several publishing firms in Boston, and editor of the “Atlantic Monthly.”
- Fiesole.**—In Italy, a town of the province of Florence. It is noted for its Etruscan and Roman antiquities.
- Fiesole, Giovanni Angelico da (FRA ANGELICO).**—Celebrated Italian painter.
- “Fifty-four Forty or Fight,”** 11, 311, 368.
- “Fighting Joe,”** 11, 514.
- “Fighting McCooks,”** 11, 514.
- Fig.**—A genus of trees of the order Moraceæ. There are more than 100 species, some of which are very large trees. They are very abundant in the Himalayas and throughout

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- India. The fruit is an important article of food in the East and is of a certain medicinal value. The best come from Smyrna. Through recent investigations of the entomological department of the U. S. an insect has been found that fertilizes the female flowers on the trees in California and the yield has during the years 1900 and 1901 been so largely increased that foreign importation will in a few years be shut out.
- Fig tree**, 5, 2.
- "Figaro Le."**—A noted Parisian periodical, founded in 1826.
- Fiji, or Feejee Islands.**—They number over 200, lie in the South Pacific Ocean, and belong to Great Britain. The people are no longer cannibals. Sugar is the principal export. Area, 8,045 sq. miles; pop. estimated (1899), 122,673. Capital, Suva.
- Filament of stamen**, 5, 11.
- Filibuster**, 11, 368.
- Filibustering**, 12, 263.
in Congress, 12, 354.
- Fillmore. Millard**, 11, 369.
- Finances, Superintendent of**, 11, 235.
- Finches**, 4, 182.
Grass, 4, 184.
Lark, 4, 184.
Pine, 4, 184.
Purple, 4, 184.
Shore, 4, 184.
- Finding a way or making one**, 14, 2.
- Findlay.**—A city in central Ohio, noted for the supply of natural gas in its vicinity. Pop. (1900), 17,613.
- Fingal's Cave.**—In the island of Staffa, off the coast of Mull, Scotland, a cave 200 ft. in length and 65 ft. in height at the entrance.
- Finland.**—A grand-duchy of Russia, bordering on the Gulf of Bothnia. Helsingfors is the chief city. Area, 144,255 square miles. Pop. (1897), about 2,500,000.
- Finland, The Kalevala of**, 3, 401.
- Finley, John Huston**, 8, 71.
- Finnan Haddie**, 4, 287.
- Fire, Flint and steel**, 5, 266.
Indian legends of, 10, 145.
insurance, 13, 186.
of London, Great, 10, 326.
Playing with, 2, 130.
Symbolism of, 2, 185.
- Fire, Early methods of making**, 5, 266.
- Fire bird**, 4, 163.
- Fire-damp.**—Light carbureted coal-gas which occurs in coal mines. When mixed with seven or eight times its proportion of air, it becomes highly inflammable and dangerous. It was to overcome this danger that Sir Humphry Davy invented the safety-lamp.
- Fire-damp**, 5, 228.
- Firefly.**—A name for insects which emit light. They appear in great numbers in summer evenings over swampy ground, flashing and disappearing in all directions in a mazy flight. In the West Indies some specimens are so large and the light is so brilliant that they are used for illuminating purposes and for decoration of dress on festivals.
- Fireflies**, 4, 319.
- Fire Island.**—A popular summer resort off the coast of Long Island, N. Y.
- Fireplace**, Danger to creeping child, 2, 84.
- Fireweed**, 5, 19.
- Fire-worshippers.**—The Parsees who lived in Persia until 638. They were the followers of Zardusht or Zoroaster, 1708.
- Firkin**, 13, 219.
- Fir-tree**, Danish fairy tale, 3, 150.
- Fiscal Bank of the United States**, 11, 372.
year, 13, 97.
- Fish**, by David Starr Jordan, 4, 261.
Cutlass, 4, 272.
Flying, 4, 272.
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- Fish, Clinton Bowen**, 11, 514.
- Fish, Hamilton**, 12, 158, 265.
- Fish Commission**, 12, 263.
- Fish-eater duck**, 4, 110.
- Fisheries**, 12, 264.
- Fisher's Hill (Va.), Battle of**, 11, 514.
- Fish hawk**, 4, 141.
robbed by the eagle, 4, 134.
- Fishing-frog**, 4, 288.
Characteristics of, 4, 288.
- Fiske, Henry E.**, on a college education, 8, 196.
- Fiske, John.**—(1842-1901.) An American author born at Hartford, Conn. He was educated at Harvard University and at the Dane Law School although he never practised law, but devoted himself to literature and education. He was lecturer on philosophy at Harvard (1869); tutor in history (1870), assistant-librarian (1872-1879). He wrote "Outlines of Cosmic Philosophy," "The Unseen World," "Darwinism and Other Essays," "Excursions of an Evolutionist," "History of the United States," and "The War of Independence."
- Fiske, John**, on "Poverty no Obstacle to a Public Career," 12, 406.
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- Fitch, John**, 11, 235.

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- Fitch, John**, steamboat builder, 8, 212.
steam navigation attempted by, 5, 277.
- Fitchburg**.—A city in Mass., on a branch of the Nashua River, noted for its manufacture of machinery. Pop. (1900), 31,531.
- Fitting for Life**, 2, 186.
- Fitzgerald, Edward**.—(1809-1883.) An English poet and translator, best known by his translation of Omar Khayyám.
- Fitzgerald, Lady Edward**.—(1776-1831.) Wife of the former.
- Fitzgerald, Lord Edward**.—(1763-1798.) An Irish politician and revolutionist and member of the United Irishmen.
- Fitzjames, James**, Duke of Berwick.—(1670-1734.) A distinguished soldier; illegitimate son of James, Duke of York (James II.) and Arabella Churchill, sister of the Duke of Marlborough.
- Five-cent piece**, 13, 162.
- Five-finger**, 5, 24.
- Five Forks (Va.), Battle of**, 11, 514.
- Five Points**.—A district in New York City, northeast of the City Hall, once noted as a center of immorality and crime, but of late years vastly improved in its social conditions.
- Flag**, 11, 235.
- Flamingo, American red**, 4, 225.
- Flamininus, Emperor**, 10, 207.
- Flammarion, Camille**.—Born, 1842; a noted French astronomer; author of a number of astronomical works.
- Flamsteed, John**.—(1646-1719.) A noted English astronomer.
- Flanders**.—An ancient and independent territory embracing all that bears that name now in Belgium, and a portion of the south of Holland and a part of the northeast of France. It was ruled by "Counts" who played an important part in early European history. Modern Flanders in Belgium is divided into East and West Flanders. The area is 2,407 sq. miles, and the pop. (1899), 1,845,479. It includes the towns of Ghent, Bruges, and Ostend.
- Flannels, To wash**, 1, 28.
- Flat**, 13, 117.
- Flat, Furnishing a**, 1, 9.
How to choose a, 1, 9.
life in large cities, 1, 8.
- Flatbush**.—A town in Long Island, N. Y., the scene of part of an important engagement known as the battle of Long Island, in 1776. It was annexed to Brooklyn in 1894, and was incorporated into the City of New York, in 1897.
- Flatfish**, 4, 274.
Characteristics of, 4, 274.
- Flaubert, Gustave**.—(1821-1880.) A noted French novelist and miscellaneous writer.
- Flax**, 5, 84.
Cultivation of, 5, 84.
Yield of, 5, 85.
- Flaxman**, 9, 407.
- Fleabane, Philadelphia**, 5, 32.
- Flea-mint**, 5, 68.
- Fleas, To destroy**, 1, 128.
- Fleet Prison, The**.—A very old prison in London. In 1290 it was a debtors' prison; it was burned in 1381 by Wat Tyler's men; again burned in the Great Fire of 1666; and again by the rioters in 1780.
- Fleet Street**.—In London, an old street of much historical interest; now one of the busiest of the city's streets.
- Fletcher, Austin B.**, on a business knowledge necessary to a lawyer, 10, 87.
- Fletcher, John**.—(1579-1625.) A celebrated English dramatist and poet.
- Fleur-de-Lis**.—A French emblem derived either from the white lily or the flag or iris. The kings of France from the time of Clovis bore an indefinite and varying number upon their banners. Charles VI. reduced the number to three, arranged one and two, in reference to either the Trinity or the three different races of French kings. (See IRIS.)
- Fleur-de-Lis**, 1, 200; 5, 29.
- Fleury, Cardinal**, 10, 341.
- Flexor**, digitorum communis muscle, 1, 275.
carpi radialis muscle, 1, 275.
carpi ulnaris muscle, 1, 275.
muscle, 1, 274.
- Flicker**, 4, 178.
- Fliegende Holländer, Der (THE FLYING DUTCHMAN)**.—Title of an opera by Wagner.
- Flint**.—A species of quartz or a mineral intermediate between quartz and opal. It is composed almost wholly of silica, and is of many colors. It strikes fire with steel very readily and was the common means of fire before the introduction of friction matches and percussion caps.
- Flint**, 5, 447.
- Flint, Charles R.**, on "Business Chances," 13, 63.
"Winning the World's Trade," 13, 235.
- Flint and the Steel**, Spanish fable, 3, 203.
- Flintlock**, 12, 190.
- Flintlocks**, 5, 447.
- Flodden Field, Battle of**, 10, 300.
- Flood**, Hindu version of the, 10, 9.
- Floors, Hardwood**, 1, 12.
Kitchen, 1, 24.
Parlor, 1, 12.
- Flora**, goddess of flowers, 1, 198.

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- Flora McFlimsey.**—The subject of a poem entitled "Nothing to Wear," written by William Allen Butler.
- Floreal, 13, 97.**
- Florence.**—In Italy, the capital of the province of Florence. A city famous for the beauty of its environments and for its art collections. Pop. (1899), 216,051.
- Florence, Rise of, 10, 278.**
- Florence, William James.**—(1831-1891.) A distinguished American comedian and playwright.
- Florence Nightingale of America.**—The name applied as a compliment to Clara Barton, by reason of her life-work in relieving the distress of sufferers by war, pestilence, famine, fire, and flood. (See BARTON, CLARA.)
- Florida.**—The extreme southeastern state of the U. S. of America. Bounded on the north by Ga. and Ala., east by the Atlantic Ocean, south by Florida Strait, and west by the Gulf of Mexico and Ala. It was discovered by Ponce de Leon in 1513, on Easter day, and for that reason called by him Florida, or, according to one authority, because he found it to be a land of flowers; settled by the Huguenots in 1562 and by Spaniards in 1565; ceded to Great Britain in 1763, to Spain in 1783, and to the U. S. in 1819; admitted to the Union in 1845; seceded Jan. 10, 1861, to become one of the Confederate states; readmitted in 1868. Tallahassee is the capital and Jacksonville, Pensacola, Key West, and Tampa are the principal cities. The surface is generally flat and the chief agricultural products are cotton, corn, and oranges and other tropical fruits. Has 45 counties; area, 58,680 sq. miles; pop. (1900), 528,542. Called the Peninsula State, or Flower State.
- "Florida," The, 11, 515.**
- Florida Strait.**—A sea passage connecting the Gulf of Mexico with the Atlantic Ocean.
- Florin, Dutch, 13, 154.**
- Florists, Women as, 7, 426.**
- Flotow, Friedrich von.**—(1812-1883.) A German composer of operas.
- Flotsam.**—Goods lost by shipwreck and floating on the water.
- Flounder, 4, 274.**
 Characteristics of the, 4, 274.
 Flesh of the, 4, 274.
 Habits of the, 4, 274.
 Summer, 4, 274.
- Flour, 5, 240.**
 Graham, 5, 89.
 Tests for good, 1, 119.
 To keep, 1, 119.
 Wheat, 1, 118.
- Flower, Roswell Pettibone, 12, 265.**
 on a college education, 8, 78.
- Flower-making** an occupation for women, 7, 432.
- Flower-raising** an occupation for women, 7, 426.
- Flowers, Language, 1, 197.**
 Parts of, 4, 397.
 Preservation, 4, 399.
 Wild, 5, 10.
- Floyd, John Buchanan, 11, 515.**
- Floyd, William, 11, 86.**
- Flume, The.**—A picturesque gorge in the Franconia Mountains, N. H.; at one point it is about 10 feet wide.
- Fluorine, Properties of, 5, 189.**
- Fluor-spar, 5, 189.**
- Flushing.**—(1) A seaport of Netherlands, on the southern coast of the island of Walcheren; it is a popular bathing resort. (2) A village and a town on Long Island, N. Y.
- Fly, Black-fly, 4, 351.**
 Bot-fly, 4, 351.
 Hessian-fly, 4, 350.
 Characteristics of the, 4, 350.
 Horse-fly, 4, 351.
 Reproduction of the, 4, 350.
 House-fly, 4, 349.
 Characteristics of the, 4, 349.
 Wheat-fly, 4, 350.
 Characteristics of the, 4, 351.
- Fly, The, Turkish Fable, 3, 180.**
- Flycatcher, 4, 197.**
 Least, 4, 199.
 Peewee, 4, 197.
 Phoebe, 4, 197.
 Vermilion, 4, 199.
 Scissors-tail, 4, 199.
- Flying Dutchman, The.**—In seamen's lore, a spectral ship appearing near the Cape of Good Hope in stormy weather, and unable to enter a port. (See FLIEGENDE HOLLANDER.)
- Flying fish, 4, 272.**
- Flying Squadron, 12, 265.**
- Flying squirrel, 4, 60.**
 Membrane of the, 4, 60.
 Tail of the, 4, 61.
- Fog Signals.**—Warnings on board ship, on coasts, or on railroads during a fog to avoid accident. The commonest means are: ringing of a bell; striking the anchor with a hammer; blowing horns or whistles.
- Fo-Hi, King of China, 10, 147.**
- Foley, John Henry, 9, 410.**
- Foley, Margaret, 9, 412.**
- Folger, Charles James, 12, 265.**
- Folio, 13, 151.**

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- Folkestone, or Folkstone.**— In Kent, England, a seaport and watering resort. Pop., about 24,000.
- Folklore, Educational value of, 3, 7.**
- Fomalhaut, a star, 5, 145.**
- Fond du Lac.**— In Wisconsin, the capital of Fond du Lac County; it has large lumber interests. Pop. (1900), 15,110.
- Fontaine, Jean de la.**— See LA FONTAINE.
- Fontainebleau.**— In France, a town about 35 miles from Paris; noted largely for its magnificent palace, one of the principal of the royal residences, from the Middle Ages. The forest of Fontainebleau, comprising 42,500 acres, is famous as one of the most beautiful forests in France.
- Fontainebleau, Peace of.**— A treaty between the emperor of France and the Dutch, concluded at Fontainebleau in 1785, by the terms of which the French forfeited their rights to free navigation of the Schelde beyond certain limits, and their claim to Maestricht, in the Netherlands, and its environs. In return, the Dutch paid 10,000,000 guilders.
- Fontanelle, 1, 273.**
- Foo Chow, or Fuchau.**— A seaport in China, province of Fukien, near the mouth of the Min. It was made one of the ports open to foreign trade in 1842. It has an enormous trade in tea. Pop. (1899), 650,000.
- Food, Care of, 1, 121.**
 for children, Fruit, 2, 445.
 Importance of good, for children, 2, 414.
 Mother's care in providing, 2, 444.
 Plain, 6, 13.
- Fool's gold, 5, 221.**
- Foot, Cord, 13, 148.**
- Football, 6, 199.**
- Foot-pound, 5, 420.**
- Foote, Andrew Hull, 11, 515.**
- Foote, Mary (HALLOCK).**— Born at Melton, N. Y., 1847. An American novelist and artist.
- Foote, Samuel.**— (1720-1777.) A noted English actor and dramatist.
- Foote's resolution, 11, 372.**
- Foraker, Joseph Benson, 12, 265.**
 on "Success in Public Office," 12, 424.
- Foramen magnum, 1, 272.**
- Foramen ovale of the heart, 1, 281.**
- Forbes, Archibald.**— (1838-1903.) A British journalist and correspondent, especially noted as a war correspondent.
- Forbes, Archibald, 14, 97.**
- Forbes, Edwin.**— (1839-1895.) An artist, noted for his drawings illustrative of the Civil War.
- Force Bill, 11, 372.**
- Force defined, 5, 253.**
- Force, Peter.**— (1790-1868.) A distinguished antiquarian whose library of 22,000 rare books and 40,000 pamphlets was purchased by Congress.
- Ford, Daniel Sharp, 14, 147.**
- Ford, John.**— (1586-1639.) An English dramatist.
- Ford, E. Onslow, 9, 410.**
- Ford, Richard M., inventor, 8, 205.**
- Ford's Theater, 12, 266.**
- Foreclosure, 13, 117.**
- Forefather's Day, 13, 97; 11, 57.**
- Foreign Affairs, Secretary of, 11, 235.**
- Foreign coins, Value of, 13, 154.**
 with English equivalents, 13, 219.
 languages, Words and phrases from, 13, 310.
 weights with English equivalents, 13, 220.
- Forest City.**— A name applied to the city of Cleveland, Ohio.
- Forest elemental, Austrian fairy tale, 3, 108.**
- Formes, Carl Johann.**— (1818-1889.) A noted German bass singer.
- Formic acid, 5, 231.**
- Formosa, or Taiwan.**— An island lying east of China, formerly a province of that country, but ceded to Japan in 1895. Area, 13,458 sq. miles. Pop., about 2,000,000.
- Formosa Strait, separating the Island of Formosa from the mainland.**
- Formulas of chemistry, 5, 171.**
- Forrest, Edwin.**— (1806-1872.) A celebrated American actor.
- Forrest, Nathan Bedford.**— (1821-1877.) A celebrated Confederate cavalry lieutenant-general.
- Fort Benton.**— A small town in northern Mont., on the Missouri River, a center of the fur-trade.
- Fort Bowyer.**— A former fort in Ala., in the vicinity of Mobile, the scene of a British defeat in 1814.
- Fort Brown (Tex.), Attack on, 11, 372.**
- Fort Caswell, 11, 515.**
- Fort Clinton, 11, 86.**
- Fort Clinton and Fort Montgomery (N. Y.), Loss of, 11, 87.**
- Fort Craig, 11, 515.**
- Fort Damnation (Va.), 11, 515.**
- Fort Dearborn, 11, 226.**
- Fort Donelson (Tenn.), Capture of, 11, 515.**
- Fort Edward.**— A small town in N. Y., on the Hudson River; an important post in the French and Indian War.
- Fort Erie (Canada), Battle of, 11, 236.**
- Fort Fisher (N. C.), Capture of, 11, 516.**
- Fort George (Canada), Capture of, 11, 237.**
- Fort Griswold (Conn.), Capture of, 11, 86.**

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Fort Harrison (Ind.), Assault on, 11, 237.

Fort Henry, Capture of, 11, 517.

Fort Independence.— Situated on Castle Island, one of the defenses of Boston.

Fort Jackson and Fort St. Philip (La.).— These fortifications are situated one upon either bank of the Mississippi River, 65 miles below New Orleans. During the first year of the Civil War they were occupied by the Confederates. They were put in the strongest possible condition, with an armament of heavy guns, and they were relied upon as a protection to the city of New Orleans. It was not deemed possible that the Federal war vessels would be able either to reduce the forts or to pass them. To make assurance doubly sure, a boom was extended across the river, consisting of heavy timbers and the hulks of vessels, bound together by chains. But Admiral Farragut forced a passage, passed the forts (Apr. 24, 1862), and took New Orleans. Before the passage of the fleet, the forts were furiously bombarded for six days, by mortarboats under the command of Com. David D. Porter. The bombardment had little effect in impairing the forts of their armament. After the fall of New Orleans the forts were surrendered to the land forces of Gen. Butler. (See FARRAGUT, DAVID GLASGOW.)

Fort Jackson, 11, 517.

Fort McAllister (Ga.), Capture of, 11, 518.

Fort McHenry (Md.), Bombardment of, 11, 237.

Fort Mackinac (Mich.), Capture of, 11, 237.

Fort Macon, 11, 518.

Fort Meigs (Ohio), Bombardment of, 11, 238.

Fort Mercer (N. J.), Attack on, 11, 86.

Fort Mifflin (Pa.).— On the Delaware River, near the mouth of the Schuylkill, one of the defenses of Philadelphia.

Fort Mimms (Ala.), Massacre, 11, 238.

Fort Monroe, 11, 518.

Fort Morgan, 11, 238.

Fort Moultrie, 11, 518.

Fort Niagara, 11, 238.

Fort Pillow (Tenn.), Capture of, 11, 519.

Fort St. Philip, 11, 517.

Bombardment of, 11, 238.

Fort Sanders (Tenn.), Attack on, 11, 519.

Fort Stedman (Va.), Assaults on.— Fort Stedman was a fortification built by the Federal troops, at the right of Gen. Grant's line in front of Petersburg, Va. Toward the end of March, 1865, it became apparent to Gen. Lee that he would be forced to evacuate his position. He wished to strike a blow, however, and planned to surprise Fort Stedman. The

assault was made Mar. 25, and was successful; the batteries were carried and 500 prisoners were taken. Two days later the guns of the adjacent Union forts were brought to bear upon it and after a furious fire the work was stormed and recaptured. About 2,000 Confederates were taken prisoners. The Union loss was 900.

Fort Stephenson (Ohio), Attack on, 11, 238.

Fort Stevens (D. C.), Battle of, 11, 519.

Fort Sumter (S. C.), 11, 520.

Fort Wagner (S. C.), 11, 521.

Fort Washington (N. Y.), Capture of, 11, 87.

Fort William Henry 11, 57.

Fort Winthrop.— Situated on Governor's Island, one of the defenses of Boston.

Fort Worth.— A city in Tex., noted as a shipping center for stock, and for its manufacture of flour, etc. Pop. (1900), 26,688.

Fortunate Islands, The.— The ancient name of the Canary Islands, a group in the Atlantic Ocean, northwest of Africa.

Fortune, The.— An old London theatre. Built in 1599; destroyed by fire in 1621, and again, by a party of soldiers, in 1649.

Fortune, The, 11, 44.

Fortune Bay Outrages.— They grew out of a conflict between the Treaty of Washington of 1871 and certain Newfoundland laws. In Jan., 1878, people of Fortune Bay, Newfoundland, attacked Gloucester, Mass. fishing craft that were taking herring, destroyed their nets and dispersed their crews. The aggressors pleaded that the Gloucester men had violated local laws. The British Cabinet decided that the treaty was paramount to the local laws and the injured fishermen were awarded \$73,000 damages.

Fortuny, Mariano, 9, 258.

Forum Romanum.— The Forum in Rome was the place where markets and courts were held. The market was the *forum venalium* and the court was the *forum judicialium*. The Roman forum was seven jugera in extent and was situated at the foot of the Capitoline Hill, surrounded by houses. It ceased to be a market about 472 B. C. The place is now a cattle market.

Fossils and fossil remains, 5, 461.

Foster, John Gray, 11, 522.

Foster, Stephen Collins.— (1826–1864.) An American composer of popular songs; among his successes are "Old Kentucky Home," "Come Where my Love Lies Dreaming," and "Old Folks at Home."

Foucault, Jean Bernard Léon.— (1819–1868.) A distinguished French physicist, especially

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- celebrated for his achievements in optics and mechanics.
- Fougères.**—In France, a town 27 miles N. E. of Rennes; a stronghold of Brittany, often besieged; the ruins of its feudal castle still remain.
- Fouquet, Jean,** 9, 260.
- Four days of June,** 10, 373.
- Four o'clock,** 5, 59.
- Fourier, François Marie Charles.**—(1772–1837.) A noted French socialist.
- Fourierism.**—A system of socialism developed by François Marie Charles Fourier (1772–1837). The underlying principle is that human society may best reach its highest development by association of 400 families on a coöperative basis founded upon natural and mathematical laws. Attempts to carry out the system, both in France and America, have failed for lack of funds.
- Four Lakes, The.**—A chain of lakes in southern Wis.
- Fourth of July Claims.**—So called because they were allowed by Congress July 4, 1864. They were for quartermaster and commissary stores taken from loyal citizens and used by the Union armies during the Civil War.
- Fowl, The Domestic,** 4, 105.
- Bantam, 4, 107.
 - Brahma, 4, 106.
 - Chittagong, 4, 106.
 - Cochin, 4, 106.
 - Crested, 4, 106.
 - Creve-cœur, 4, 107.
 - Dominique, 4, 106.
 - Dorking, 4, 107.
 - Fork-tail jungle, 4, 105.
 - Frizzled, 4, 107.
 - Game, 4, 105.
 - bantam, 4, 107.
 - Hamburg, 4, 106.
 - Japanese long-tailed, 4, 107.
 - Leghorn, 4, 106.
 - Malayan, 4, 106.
 - Origin of, 4, 105.
 - Polish, 4, 106.
 - Rumpless, 4, 107.
 - Scotch dumpies, 4, 107.
 - Seabright bantam, 4, 107.
 - Silk, 4, 107.
 - Spangled Hamburg, 4, 106.
 - Spanish, 4, 106.
- Fowler, Orson Squire.**—(1809–1887.) Distinguished as a phrenologist, and founder of the "American Phrenological Journal" in 1838.
- Fox,** American, 4, 32.
- red, 4, 33.
 - Cunning of the, 4, 33.
- Fox,** American—*Continued.*
- Food of the, 4, 34.
 - Gray, 4, 33.
 - Habits of the, 4, 34.
 - Home of the, 4, 34.
 - Kit, 4, 33.
 - Red, 4, 33.
 - Silver, 4, 34.
 - Tail of the, 4, 33.
- Fox and the Jackall,** Hindu fable, 3, 167.
- Fox and the Stork,** 3, 193.
- Fox-hunting,** 4, 33.
- Fox-runways,** 4, 33.
- Fox, Charles James.**—(1749–1806.) An English statesman and Cabinet minister under Lord North. In 1772, in consequence of a quarrel with Lord North, he passed over to the Opposition. He was the most powerful advocate of just concession to the American colonists during the War of the Revolution. His contest with Pitt, the trial of Warren Hastings, the French Revolution, gave him abundant opportunity to exert his wonderful talent and oratory.
- Fox, Charles James,** 11, 87.
- Fox, George.**—(1624–1691.) Founder of the Society of Friends.
- Fox, George,** 11, 46.
- Fox, Zachariah,** 14, 117.
- Foxe, or Fox, John.**—(1516–1587.) Englishman; author of "Actes and Monuments," popularly known as "Foxe's Book of Martyrs."
- Fox Indians.**—Of the Algonquin stock. They aided the British in the Revolution, and again during the War of 1812. By treaties made between 1804 and 1830 they ceded large tracts to the U. S., and after the Black Hawk War (see BLACK HAWK WAR) made further concessions. The remnants of the tribe are incorporated with the Sacs and dwell on a small reservation in Oklahoma.
- Foxglove** (*Digitalis purpurea*).—A well-known plant of the order *Scrophulariaceæ*. It is poisonous and medicinal and yields the active principle digitalis.
- Foxhound,** 4, 20.
- Fox sparrow,** 4, 172.
- Foxtail grass,** 5, 85.
- Fox terrier,** 4, 21.
- Fra Angelica,** 9, 219.
- Fra Bartolommeo,** 9, 227.
- Fra Diavolo** (MICHELE PEZZA).—(1760–1806.) An Italian robber and partizan of the Bourbons. The name is Italian for "Brother Devil." It is also the title of a comic opera, which appeared in 1830, by Auber and Scribe.

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Fragonard, Jean Honoré, 9, 264.

Framingham.—A town in Mass., 20 miles from Boston. Pop. (1900), 11,302.

Franc, French, 13, 154.

France.—The principal republic of Europe. It has an area of 204,146 sq. miles and a population of about 39,000,000, exclusive of her colonies, which have 35,000,000. In the south and east the surface is mountainous, and in the north and west it is quite level. Grain, wine, fruit, vegetables, dairy produce, and cattle are raised in large quantities. In the quality of its silk, cotton, woollens, laces, linens, chemicals, glass, and pottery France is unsurpassed by any other nation. The government consists of a President elected for 7 years, a senate of 300 members, and a chamber of deputies of 584. The colonies are in Africa, Asia, Oceanica, and America. Roman Catholicism is the prevailing religion of France.

France and Great Britain, Non-intercourse act against, 11, 208.

Colonial possessions of, 11, 21.

in 1848, 10, 378.

leases Kwangehanwan, 11, 29.

National flower of, 1, 200.

War with China, 10, 163.

Francesca da Rimini.—Daughter of Guido da Polenta, lord of Rimini, and wife of Giovanni Malatesta. She loved the younger brother of her husband. The latter slew them both (1288). This furnishes an incident in Dante's "Inferno." It has been the subject of many poems and paintings.

Franche-Comté.—An ancient government of eastern France.

Francia.—(1450-1518.) Italian painter.

Francis I.—(1777-1830.) King of the Two Sicilies, 1825-1830.

Francis II.—(1836-1894.) King of the Two Sicilies.

Francis II.—(1544-1560.) King of France, 1559-1560. Husband of Mary Queen of Scots.

Francis I.—(1708-1765.) Emperor of the Holy Roman Empire, 1745-1765. Husband of Maria Theresa of Austria.

Francis I.—(1768-1835.) Emperor of Austria and of the Holy Roman Empire.

Francis I.—(1494-1547.) King of France (1515-1547).

Francis Joseph I.—(1830-) Emperor of Austria (1848-).

Francis of Assissi.—(1182-1226.) An Italian monk and preacher, who founded the Franciscan order of monks in 1210.

Francis, Sir Philip.—(1740-1818.) Is said to have been the author of "Junius's Letters." An English politician and author.

Francis I. of France, 10, 294.

Francis II. of France, 10, 442.

Francis Joseph crowned king of Hungary, 10, 380.

Franco-German War.—A war between France and Germany (1870-71) on account of the election of a Hohenzollern prince to the Spanish throne.

The leading events were:—

Declaration of war, July 19, 1870.

Battle of Weissenburg, Aug. 4, 1870.

Battle of Worth, Aug. 6, 1870.

Battle of Spicheren, Aug. 6, 1870.

Battles around Metz, Aug. 14-18, 1870.

Battle of Vionville, Aug. 16, 1870.

Battle of Gravelotte, Aug. 18, 1870.

Battle of Sedan, Sept. 1, 1870.

Surrender of the French, Sept. 2, 1870.

Siege of Paris by Prussians, Sept. 19, 1870.

Surrender of Strasburg, Sept. 27, 1870.

Surrender of Metz, Oct. 27, 1870.

Battle of Coulmiers, Nov. 9, 1870.

Battle of Beaune-la-Rolande, Nov. 28, 1870.

Sortie from Paris, Nov. 30, 1870.

Battle of Orléans, Dec. 2-4, 1870.

Sorties from Paris, Jan., 1871.

Battle of Le Mans, Jan. 12, 1871.

Battle of Lisaine, Jan. 15-17, 1871.

Surrender of Paris, Jan. 28, 1871.

Peace at Versailles, Feb. 26, 1871.

Occupation of Paris, Mch. 1-3, 1871.

Peace of Frankfort, May 10, 1871.

Franco-German War, 11, 8.

Franconia.—A great duchy of the old German kingdom, situated chiefly in the valley of the Main.

Franconia, Lower.—A district in the north-west of Bavaria.

Franconia, Middle.—A district in western Bavaria.

Franconia, Upper.—A district in the northeast of Bavaria.

Franconia Mountains.—A ridge in New Hampshire. Mount Lafayette (5,270 ft.) is the highest point.

Franconian line of kings, 10, 243.

Frangipani.—A noble Roman family of the 11th century. They were the leaders of the Ghibelline party.

Frank Forester.—Pseudonym of Henry William Herbert (which see).

Frankfort.—The capital of Kentucky, on the Kentucky River. Pop. (1900), 9,487.

Frankfort-on-the-Main.—A city in Prussia in Hesse-Nassau, on the north bank of the Main. It was a Roman station. It is noted for its commerce and is one of the greatest banking

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centers in the world. Pop. (1900), 288,489. A council was held here in 764 by direction of Charlemagne. The treaty which concluded the war between Germany and France was concluded here Feb. 26, 1871.

Frankfort, Diet at, 11, 5.

Franking Privilege, 12, 266.

Franklin, or Frankland.—The first constitution of N. C. made provision for a future state within her limits, on the western side of the Alleghany Mountains. In May, 1794, N. C. ceded to the U. S. her territory west of the Alleghanies provided Congress would accept it within two years. This Congress did not do, and a majority of the people within the territory concluded to adopt a constitution and organize a state of their own. This they proceeded to do, and called a convention which met at Jonesboro, Aug. 23, 1784. The convention adjourned after issuing an address to the people. In the following November, the delegates again assembled at Jonesboro but broke up in confusion, because of the fact that in October of that year N. C. repealed the act of cession. Dec. 14, 1784, another convention assembled at Jonesboro and adopted a constitution, which was to be ratified or rejected by a convention called to meet at Greenville, Nov. 14, 1785. In the meantime a general assembly was elected which met at Greenville early in 1785 and chose John Sevier for governor and other officers. The new state which they attempted thus to create was named in honor of Benjamin Franklin and is therefore properly called Franklin not Frankland. Later they concluded they would seek admission to the Union, and accordingly they made an effort to have Congress recognize the new state. The boundary lines show that it included what are now 15 counties of Va.; six of W. Va.; one-third of Ky.; one-half of Tenn.; two-thirds of Ala., and at least one-fourth of Ga. The convention met in Greenville in Nov. 1785, to adopt a constitution, but when the constitution proposed was submitted it was rejected and in lieu thereof the constitution of N. C. was adopted. This was the beginning of the trouble which ended in the overthrow of the state. The assembly or legislature of the state continued to meet for several years, during which time dual governments existed in the territory and many acts of violence were committed by one party against the other. In Oct., 1788, Sevier was arrested and carried to N. C. for trial, his property having been attached in January of that year. Soon after his arrest the government of Franklin collapsed and N. C. passed an act of "pardon and oblivion" resuming her author-

ity over these people. Later, N. C. passed a second act ceding the territory to the U. S., and Aug. 7, 1790, President Washington appointed William Blount governor of the territory. The state of Tenn. was soon thereafter organized out of this territory.

Franklin (Tenn.), Battle of, 11, 522.

Franklin, Benjamin, experiments in electricity, 5, 311.

Early education of, 8, 169.

Life of, 11, 88.

referred to, 14, 6, 225.

Franklin, Sir John, 11, 372.

Franklin, William, 11, 98.

Franklin, William Buell, 11, 523.

Franks, 10, 242.

invade Gaul, 10, 235.

Franz, Robert.—(1815-1892.) A German composer, especially noted for his songs.

Fraser River.—A river in British Columbia, flowing into the Gulf of Georgia. It has a course of over 800 miles.

Fraternity system in college, 1, 74.

Frauds, Statute of, 13, 128.

Fraxinus Americana, 4, 417.

lanceolata, 4, 419.

nigra, 4, 417.

ornus, 5, 4.

Pennsylvanica, 4, 418.

pubescens, 4, 418.

quadrandulata, 4, 418.

sambucifolia, 4, 417.

Frazier's Farm (Va.), Battle of, 11, 524.

Fréchette (*frā-she't'*), **Louis Honoré.**—A French Canadian poet, whose work was crowned by the French Academy in 1880. He was born at Levis, opposite Quebec City, in 1839.

Freckles, Lotion to remove, 1, 300.

Frederick.—The capital of Frederick Co., Md., 41 miles from Baltimore. Pop. (1900), 9,296.

Frederick III.—(1415-1493.) Emperor of the Holy Roman Empire (1440-1493).

Frederick I.—(1657-1713.) King of Prussia (1701-1713).

Frederick II., "The Great."—(1712-1786.) King of Prussia (1740-1786).

Frederick III.—(1831-1888.) German emperor and king of Prussia (Mar. 9-June 15, 1888).

Frederick I.—(1754-1816.) King of Württemberg.

Frederick I., Barbarossa.—The most celebrated emperor of the Holy Roman Empire, was crowned emperor 1155. He took part in the Third Crusade in 1189 and was drowned in Asia Minor.

Frederick II.—(1194-1250.) Emperor of the Holy Roman Empire (1220-1250).

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- Frederick III.**, "The Handsome."—(1286-1330.) King of Germany (1314-1322).
- Frederick I.**—(1425-1476.) "The Victorious." Elector-Palatine (1451-1476).
- Frederick II.**, "The Wise."—(1482-1556.) Elector-Palatine (1544-1556).
- Frederick III.**, "The Pious."—(1515-1576.) Elector-Palatine (1559-1576).
- Frederick IV.**, "The Upright."—(1574-1610.) Elector-Palatine (1592-1610).
- Frederick V.**—(1596-1632.) Elector-Palatine (1610-1632).
- Frederick III.**—(1609-1670.) King of Denmark and Norway.
- Frederick IV.**—(1671-1730.) King of Denmark and Norway (1699-1730).
- Frederick V.**—(1723-1766.) King of Denmark and Norway (1746-1766).
- Frederick VI.**—(1768-1839.) King of Denmark and Norway (1808-1839).
- Frederick VII.**—(1808-1863.) King of Denmark (1848-1863).
- Frederick William I.**—(1688-1740.) King of Prussia (1713-1740).
- Frederick William II.**—(1744-1797.) King of Prussia (1786-1797).
- Frederick William III.**—(1770-1840.) King of Prussia (1797-1840).
- Frederick William IV.**—(1795-1861.) King of Prussia (1840-1861).
- Frederick Barbarossa**, 10, 258, 275.
- Frederick II. of Germany**, 10, 275.
the "Great" of Prussia, 10, 335.
- Frederick**, "The Handsome" of Bavaria, 10, 276.
- Frederick William of Prussia**, 10, 375.
- Frederick William IV.**, 10, 375.
Head of the German nation, 11, 5.
- Fredericksburg (Va.)**, Battle of, 11, 524.
referred to, 14, 371.
- Fredericton.**—The capital of New Brunswick, Canada, is situated on the St. John River, 84 miles from its mouth. Pop. (1901), 7,117.
- Frederikshald**, Siege of, 10, 334.
- Free Banking System**, 11, 373; 13, 117.
- Free Negroes**, 11, 373.
- Free Ships, Free Goods**, 11, 373.
- Free Soilers**, 11, 379.
- Free Trade**, 13, 118.
- Freedman's Bureau**, 11, 525.
- Freedom**, False ideas of personal, 2, 200.
necessary for morally weak children, 2, 246.
to development of children, 2, 78.
- Freeman, Edward Augustus.**—(1823-1892.) An English historian who became regius professor of history at Oxford (1884).
- Freeman, Mrs.**—The name under which the Duchess of Marlborough, Sarah Jennings, conducted a correspondence with Queen Anne, who signed herself Mrs. Morley.
- Freeman, James**, 11, 238.
- Freeport.**—A city in northern Illinois, and the capital of Stephenson Co., on the Pecatonica River, 108 miles from Chicago. Pop. (1900), 13,258.
- Freetown.**—The capital of Sierra Leone in West Africa. Pop., 30,033.
- Freezing**, Lindo machine for, 5, 170.
mixtures, 5, 168, 270.
point of water, 5, 160.
- Freight traffic of the world**, 13, 335.
- Frelinghuysen, Frederick Theodore**, 11, 239; 12, 266.
- Fremiet**, 9, 402.
- Fremont.**—A city in northern Ohio, on the Sandusky River, the scene of Croghan's defense of Fort Stephenson in 1813. Pop. (1900), 8,439.
- Fremont, John Charles**, 11, 374.
- Fremont's Expedition**, 11, 376.
- Fremont's Peak.**—The highest peak of the Wind River Mountains in Wyo., about 13,790 feet high.
- French, Daniel Chester**, 9, 413, 414.
- French, William Henry**, 11, 526.
- French and Indian War**, 11, 57.
empire, Fall of the, 11, 4.
fables, 3, 185.
fairy tales, 3, 65.
monarchy, 10, 265.
painting, 9, 259.
poodle dog, 4, 21.
- French Revolution.**—(1789-1795 or 1799 or 1804.) The chief events in the French Revolution were :—
Meeting of States-General, 1789.
The Third Estate becomes the National Assembly, June 17, 1789.
Tennis-Court oath, June 20, 1789.
Storming of the Bastille, July 14, 1789.
Bread-riot and march to Versailles, Oct., 1789.
Unsuccessful flight of the king, June 20, 1791.
Adoption of the Constitution, Sept. 17, 1791.
Legislative Assembly opened, Oct. 1, 1791.
War against Austria and Prussia, Apr., 1792.
Tuileries attacked, June 20, 1792.
Massacres of September, Sept., 1792.
Valmy fought, Sept. 20, 1792.
National Convention opened, monarchy abolished and republic proclaimed, Sept. 21, 1792.
Battle of Jemmapes, Nov. 6, 1792.
Nice and Savoy annexed, 1792.
Louis XVI. executed, Jan. 21, 1793.

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French Revolution—Continued.

- European powers combine against France, Feb., 1793.
- Beginning of Vendean wars, 1793.
- Neerwinden fought, March, 1793.
- Revolutionary tribunal established, March, 1793.
- Committee of Public Safety established, April, 1793.
- Girondists overthrown, June, 1793.
- Reign of Terror, 1793-94.
- Marat assassinated, July, 1793.
- Marie Antoinette executed, Oct., 1793.
- Toulon besieged, Dec., 1793.
- Hébertists overthrown, March, 1794.
- Danton executed, April 5, 1794.
- Fleurus fought, June 26, 1794.
- Robespierre overthrown, July 27, 1794.
- Bread-riots, 1795.
- Holland conquered, 1795.
- "Sections" in revolt subdued by Bonaparte, Oct. 5, 1795.
- Directory supplants the convention, Oct.-Nov., 1795.
- Napoleonic wars begun, 1796.
- Consulate, Nov., 1799.
- Peace of Lunéville, Feb. 9, 1801.
- Concordat, 1801.
- Peace of Amiens, 1802.
- Napoleon consul for life, 1802.
- Empire established, May 18, 1804.
- See NAPOLEON, EUROPE AFTER.
- French Revolution, 10, 341.**
 - influence on America, 11, 179.
 - year, 13, 97.
 - spoliation claims, 11, 239.
- Frenchtown, 11, 239.**
- Frère (*frâr*), Charles Théodore.**—(1815-1888.) A French painter of landscapes and Oriental subjects.
- Frere, Sir Bartle.**—(1815-1884.) An English statesman and official, was governor of Cape Colony during the Zulu War against Cettiwayo.
- Fresenius, Karl Remigius.**—(1818-1897.) A German chemist and authority.
- Fresh Fish.**—A term in common use among the soldiers during the Civil War. It was applied by prisoners of war, in a building or stockade, to new arrivals of captives.
- Fresh-water marsh-hen, 4, 130.**
- Fretfulness, 2, 260.**
 - a sign of physical disorder, 2, 256.
 - caused by ill-health, 2, 257.
 - mismanagement, 2, 257.
 - Good food in, 2, 257.
 - increased by "nagging," 2, 258.
 - Sarcastic treatment of, 2, 257.
 - Sleep needed in, 2, 256.

- Frey, 10, 127.**
- Freyja, 10, 127.**
- Friday, Black, 13, 92.**
- Friends, 11, 46.**
- Friendship and companionship, 14, 381.**
- Frigg, 10, 127.**
- Frimaire, 13, 97.**
- Fringed gentian, 5, 29.**
- Frisian-Holstein cattle, 4, 16.**
- Frith, William Powell.**—(1819-) An English painter and royal academician.
- Frizzled fowl, 4, 107.**
- Fröbel, Friedrich.**—(1782-1852.) A German educator and founder of the kindergarten system.
- Frobisher, Sir Martin.**—An English navigator and explorer, who died in 1594. He made several expeditions to effect the development of Canada; and fought against the Armada in 1588. Frobisher Bay, an arm extending into Baffin Land, was named after him.
- Froebel, Occupations of, 2, 416.**
 - on the relation of intellect and will, 2, 222.
 - quoted on development of children, 2, 173.
 - quoted on play, 2, 120.
 - system based on play, 2, 118.
- Frog, 4, 244, 253.**
 - Blacksmith, 4, 254.
 - Bull-frog, 4, 254.
 - Characteristics of the, 4, 254.
 - Habits of the, 4, 254.
 - Characteristics of the, 4, 254.
 - Eggs of the, 4, 254.
 - Home of the, 4, 254.
 - Legs of the, 4, 254.
 - Skin of the, 4, 254.
 - Tree-frog, 4, 260.
 - Characteristics of the, 4, 260.
 - Flying, 4, 260.
 - Value to science of the, 4, 254.
- Frog-fish, 4, 288.**
- Froissart, Jean.**—(1337-1410.) A French historian and chronicler of events between 1325 and 1400.
- "Frolic," The, 11, 239.**
- Fronde, The.**—A satirical epithet applied to the party which waged civil war in France, during the minority of Louis XIV., against the Court party, from 1648-1652. (See MAZARIN.)
- Frontal bones, 1, 272.**
- Frontenac, Comte Louis de Buade de.**—(1621-1698.) A French governor of Canada (1672-82 and 1689-98), who by sheer force of will saved the colony in critical times.
- Frost, Arthur B.**—An American artist and well-known illustrator, born, 1851.
- Frostbites, Treatment of, 1, 342.**

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Frothingham, Richard. — Born at Charlestown Mass., 1812. A political historian, author of "History of the Siege of Boston," etc.

Froude, James Anthony. — (1818-1894.) A celebrated English historian.

Fructidor, 13, 97.

Fruit as a food for children, 2, 445.

Frustum of a pyramid, 7, 253.

Fry, Elizabeth, 14, 337, 373.

Fuca, Juan de, Strait of. — A passage separating Washington state from the Island of Vancouver. It was named after the famous Spanish-Greek navigator who discovered and explored it (1592). It joins the Pacific Ocean and the Gulf of Georgia.

Fuchsia. — A genus of plants found native in the southern part of North America and in South America. The genus was named in honor of Leonhard Fuchs (1501-65), a professor of botany at Tübingen.

Fugitive Slave Laws. — Article IV. section 2, of the Constitution provides: "No person held to service or labor in one state, under the laws thereof, escaping into another, shall in consequence of any law or regulation therein, be discharged from such service of labor, but shall be delivered up on claim of the party to whom such service or labor may be due." In pursuance of this declaration, Congress, in 1793, passed the first fugitive slave law, which provided that on proof of ownership before a magistrate of the locality where a slave was found, the magistrate should order the slave to be delivered to his owner, without trial by jury. Obstructing an arrest or harboring a fugitive slave was punishable by a fine of \$500. In 1850, as a part of the compromise measures of that year, a law was passed providing for U. S. commissioners to aid in the more strict enforcement of the law. Proof of identity, and two witnesses to the fact of escape, were all that was required in evidence. The negro could neither testify nor have a jury trial. In all the colonies before the Revolution, laws had been passed providing for the return of fugitive slaves. The New England Confederation of 1643 had provided for mutual extradition of slaves. Extradition from British territory had been denied by the decision of the Somersett case in 1771. In the case of *Prigs vs. Pa.* (1842) the Supreme Court held that the execution of the law of 1793 devolved upon Federal authorities alone; that state authorities could not be forced to act. Several states thereupon forbade action by their officials. The act of 1850 aroused much bitter feeling in the North, and "personal liberty" laws were passed in many of the states, some of them

conflicting with Federal laws and some even with the Constitution itself. The Civil War ended the whole matter and the laws were repealed.

Fugue. — A musical composition in which the parts do not all begin at once, but follow after one another as though *fleeing* from one another.

Fuh-chow-Foo, a free port, 10, 161.

Fuller, George. — (1822-1884.) An American figure and portrait painter.

Fuller, George, 9, 331.

Fuller, John Wallace. — (1827-1891.) An officer of U. S. volunteers in the Civil War.

Fuller, Melville Weston. — Born at Augusta, Me., 1833. A celebrated jurist. He was appointed Chief-justice of the Supreme Court of the U. S. by President Cleveland, in 1888.

Fuller, Melville Weston, 12, 266.

Fuller, Sarah Margaret (Marchioness Ossoli). — Born 1810; lost by shipwreck off Fire Island, near New York, 1850. A noted American author.

Fuller, Sarah Margaret, referred to, 14, 184.

Fulton, Robert, Life of, 5, 276.

studied painting under West, 5, 279.

story of, 8, 212.

referred to, 14, 178.

"Fulton," The, 11, 240.

Fulton's Field, 14, 26.

Funchal. — The capital of the island of Madeira. Pop., about 20,000.

Fund, 13, 118.

Sinking, 13, 197.

Funding, 13, 118.

Funds, Transferring, 13, 241.

Fundy, Bay of. — An arm of the Atlantic which separates the provinces of New Brunswick and Nova Scotia, in the Dominion of Canada. It is about 180 miles long and has an average width of 35 miles. It is remarkable for the greatest rise of tide in the world, sometimes reaching a height of 70 ft.

Fungus, 5, 94.

Funston, Brigadier-General Fred, 12, 186, 267.

Fur, Alaska sable, 4, 49.

Badger skins, 4, 58.

Beaver, 4, 52.

Mink, 4, 50.

Muskrat, 4, 53.

Otter, 4, 54.

Raccoon, 4, 56.

Skunk's, 4, 49.

Furlong, 13, 162.

Furnace, Blast, 5, 218.

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Furnishing, Taste in, 1, 10.

Furniture, Book-cases, 1, 15.

for the dining-room, 1, 16, 17.

for a flat, 1, 9.

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Furniture for a nursery, 1, 21, 23.

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sleeping-rooms, 1, 19.

Fuseli, 9, 281.

Fusion, 5, 275.

Point of, 5, 275.

Watery, 5, 275.

G

Gaboriau, Émile.—(1835–1873.) A noted French novelist.

Gabriel.—The name of one of the archangels.

Gaddi, Taddeo.—(1300–1366.) A Florentine painter and architect.

Gade (*gä'de*), Niels Wilhelm.—(1817–1890.) A distinguished Danish composer and conductor.

Gadsden, Christopher, 11, 98.

Gadsden Purchase, 11, 380.

Gadshill.—An elevation near Rochester, England. Charles Dickens resided there.

Gaeta.—A seaport of the province of Caserta, on the west coast of Italy. It is strongly fortified and is a town of much historical interest.

"Gag Law," 11, 273.

Gag Rule, 11, 380.

Gage, Lyman Judson, 12, 267.

on "The Ladder to Success in Banking," 13, 22.

referred to, 13, 76.

Gaines, C. C., on "Training Young Men for Business," 13, 56.

Gaines, Edmund Pendleton, 11, 240.

Gaines, Bishop Wesley J., 8, 68.

Gaines's Mill (Va.), Battle of, 11, 526.

Gainsborough, Thomas.—(1727–1788.) A celebrated English portrait painter.

Gainsborough, Thomas, 9, 279.

Galahad, Sir.—In Arthurian legend, the noblest and purest knight of the Round Table. The "Order of the Round Table" was established by the British chieftain, King Arthur, who lived in the 6th century, the era of the half-legendary bard and enchanter, Merlin, who was counselor to the king. At the Round Table, festivals were held, the Knights of the Court sitting round it, with the Holy Grail (Sangraal) in their midst. Among them, sitting in the "Seat Perilous," was Sir Galahad, son of Sir Launcelot of King Arthur's court by marriage with Elaine, who, according to the legend, had been permitted, owing to his sanctity, to see the Holy Grail (the chalice used by Christ at the Last Supper, in which

Joseph of Arimathea is said to have caught the last drop of our Lord's blood as he was taken from the cross). In the quest of this holy vessel, visible only to pure eyes, Sir Galahad was the only one of the knights who was permitted to see it, for, as the legend relates, when men became sinful it had disappeared. On its recovery depended the honor and peace of England, and so when Galahad had succeeded in quest of it, he was honored with a distinctive seat at the Round Table—a seat called "the perilous," for whoever else sat in it the earth swallowed. The exploits of Arthur and his chivalrous knights have come down to us through Breton (French) romances, translated by Sir Thomas Malory in his "Morte D'Arthur" in the 15th century. The legends are supposed to have been written down in the 12th century. See Malory's Romance, and Tennyson's "Sir Galahad"; also his "Elaine" and the "Holy Grail," in the "Idylls of the King."

Galahad, 3, 443.

Galapagos Islands.—In the Pacific, west of Ecuador, a group of volcanic islands, noted chiefly for the enormous turtles found there.

Galatea.—(1) In Greek mythology, a sea-nymph. (2) A statue loved by Pygmalion and animated, at his request, by Venus. Not the Galatea of "Acis and Galatea."

Galatia.—Anciently a division of Asia Minor; conquered and settled by the Gauls in the third century B. C. It became a province of Rome in 25 B. C.

Galaxy, The, or The Milky Way.—A great circle of luminous bodies which encircles the heavens from one horizon to the other. It is composed of millions of stars lower than the eighth magnitude.

Galba, 10, 227.

Galen, Claudius.—A noted Greek physician, who lived in the second century and gained a great reputation at Rome in the era of the emperor Marcus Aurelius, when he was physician to the Roman court. Over eighty of his

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treatises on medicine have come down to us, in which are gathered up all the medical knowledge of Galen's time. He wrote also of philosophy, for he had traveled much and had thought deeply. He was born at Pergamus, in Mysia, in 130 A. D., and is supposed to have died in Sicily about 201 A. D.

Galena.—A city in northwestern Ill., on the Galena River. The center of a lead-mining district. Pop. (1900), 5,005.

Galena, or Lead-glance.—A mineral composed of 13.3 of sulphur and 86.7 of lead. It is called a sulphuret of lead. It contains usually some silver, copper, zinc, antimony, and selenium. When crystallized it takes the form of octahedrons or cubes. It occurs in veins, beds, and masses.

Galena, 5, 439.

Galenite, 5, 212, 216.

Galesburg.—A city in Ill., seat of Knox College (non-sectarian), and Lombard University (Universalist). Pop. (1900), 18,607.

Galicia.—A crownland of Austria-Hungary, lying north of the Carpathians. Capital, Lemberg. Natural productions, lumber, grain, lead, zinc, petroleum, salt, etc. Pop. (1890), about 6,600,000.

Galilee.—In ancient history, the northern division of Palestine. Now a Turkish possession.

Galilee, Sea of, also called the Sea of Tiberius, and the Lake of Gennesaret, is situate in northern Palestine, and is 13 miles in length and six in breadth. It lies in a deep basin, of volcanic origin, over 650 feet below the level of the sea. The Jordan flows into it, and the region about is replete with sacred associations of the time of Christ, when it was more densely populated than it is to-day. On its banks are Bethsaida, Capernaum, and Tiberius, cities in which are found the ruins of many fine synagogues. Galilee to-day forms part of the division called the "pashalic" of Damascus, in the Turkish province of Syria.

Galileo, Life of, 10, 278.

referred to, 8, 15; 14, 95, 163.

Galin, Pierre.—(1786-1822.) A French musician, instructor of mathematics at Bordeaux.

Galitzin, Prince Dmitri.—Died, 1738. A Russian statesman and diplomatist.

Gallatin, Albert, 11, 140.

Gallaudet, Edward Miner.—Born at Hartford, Conn., 1837, son of T. H. Gallaudet. He became president of the National Deaf-Mute College at Washington, D. C., in 1864.

Gallaudet, Thomas.—Born at Hartford, Conn., 1822. An American clergyman, son of T. H. Gallaudet. During 1843-58, he was engaged

in the New York Institution for the Instruction of the Deaf and Dumb; in 1852, he founded St. Ann's Church for the Deaf-Mutes; and became manager of the Church Mission to Deaf-Mutes.

Gallaudet, Thomas Hopkins.—(1787-1851.)

He was the founder of the first deaf-mute institution in America, at Hartford, Conn.

Galley.—A long, low, single-decked vessel, propelled by oars or sails, used as a war vessel by the ancients, and still to be seen, in a modified type, in the Mediterranean. As vessels of war, they were generally manned by slaves or criminals, chained to the oars, and known as galley-slaves. Occasionally, they were Turkish or Moorish captives or Christian prisoners. Between the small deck at the prow and the one at the stern, the rowers were seated on either side of a longitudinal bridge or plankway, on which stood those in charge of the craft, with boatswains, armed with long whips, which they used to scourge the slaves. On large galleys, as many as 250 or 300 of these rowers would be crowded together, in addition to the fighting men who manned them and worked the guns and were ready on occasion to board an enemy's vessel.

Gall-flies.—Have you ever observed little rounded masses of vegetable matter, growing on the leaves and stems of plants, and having the appearance of fruit, or buds, growing on the tree? Those found on the oak tree are sometimes called oak-apples, but they are more properly called galls.

If you taste one, you will find that it does not at all resemble an apple, in taste, for it is extremely bitter. Upon cutting into a gall, you will find inside a little, white, worm-like creature, but there is no sign of a hole through which he could have entered. It would seem that he must have grown there, and that is really the case. The little creature came from an egg that was laid by the mother, when the leaf, or stem, was green and smooth.

When the female lays her egg, she deposits with it a sort of liquid, or virus, which causes the vegetable matter to grow around it and when the insect hatches out, he finds himself in the midst of plenty of food, upon which to feed. When he has eaten sufficient to make him grow large and strong, he gnaws his way out of the gall, and appears as the little insect known as the Gall-fly.

There are many varieties of these little Gall-flies, all of which have much the same appearance as a wasp, except that they are very, very much smaller, some of them being only a little more than one-eighth of an inch

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in length. Each kind of Gall-fly makes galls of a certain kind, and the various kinds of galls differ very much from one another. Some kinds are shaped like apples, and others like bunches of currants; some are as hard as stones, and others as soft and as juicy as fruit. Some kinds of galls are useful, as for instance, those found on an oak tree that grows in western Asia. These are used in large quantities in the manufacture of ink.

Gallic Acid, 5, 244.

Gallienus, son of Valerian, 10, 400.

Gallissonnière (ROLAND M. B.), **Marquis de la**.—A French admiral and governor of Canada prior to the Conquest; was born in France in 1693, and died there in 1756. The period of his governorship of New France was the years 1745-49, when France and England sought to decide the question which Power should be supreme on the North American continent. The whole interior of the continent was at this time claimed by France, while the English were shut in between the mountain ranges of the Alleghanies and the sea. The English colonists, however, would not be hemmed in either by nature or by France, and sought, like the French, adventure and gain in the fur trade of the Far West. The French, resenting the intrusion, began to erect a series of forts, to mark the boundaries of their possessions and conserve the inland fur trade. Already, in the Gulf of the St. Lawrence, the first scene in the opening drama had been enacted at Louisburg. This stronghold in Cape Breton, which guarded the marine highway to New France, had surrendered to England and her colonial levies. French pride, hurt at this loss, thereupon sent Count de la Gallissonnière to Canada, but he accomplished little of his mission, owing to the extravagant territorial assumption which he put forward in behalf of his country, which offended the English colonists and roused the suspicion of many of the Indian tribes.

Gallon, 13, 162.

Imperial, 13, 162.

Gallus, a genus of birds, 4, 105.

Galt, Sir **Alexander Tilloch**.—(1817-1893.) A noted Canadian statesman. During the year of confederation of the provinces into the Dominion of Canada (1867), he was minister of finance in the Cabinet. He afterwards held responsible cabinet positions. He wrote "Canada from 1849 to 1859" and contributed frequently to magazines.

Galvani, **Luigi**.—A distinguished Italian physicist and surgeon, who lived in the latter half of the 18th century. His great achievements

were in the field of galvanic or voltaic electricity. His chief experiments were with skinned frog's legs, the muscle-contractions of which, in contact with metals, led to the use of the electric battery and to the demonstration of electric currents. (See **GALVANOMETER**.)

Galvanism.—See **ELECTRICITY**.

Galvanized Iron.—Iron is so-called which has been coated with zinc being dipped into a bath of amalgam of zinc and mercury and a little sodium.

Galvanized iron, 5, 210.

Galvanometer.—An instrument for measuring the intensity of an electric current, usually by the deflection of a magnetic needle. Varieties of this electrical instrument have been perfected by Edison, by Lord Kelvin, and by D'Arsonval. The two types most in use are the D'Arsonval galvanometer, and the one perfected by Kelvin, and by Paschen, a German scientist. The latter is one in which the magnet is fixed and the conductor suspended so as to rotate between the poles of the magnet; the other, of the magnetic type also, is one in which the conductor is bent into a circular coil of wire, in the middle of which a small magnet is suspended. When a current is passed through the wire, previously placed in the plane of the magnetic field, the latter will be changed and the suspended magnet will turn on its axis, thus showing the presence and intensity of the current.

Galveston, Tex.—A seaport and city, on Galveston Island, between the Gulf of Mexico and Galveston Bay, noted for its exports of cotton. In the Civil War, it was occupied by Federal troops in 1862 and retaken by the Confederates in the following year. In 1885, it was devastated by a calamitous fire, and on Sept. 8 and 9, 1900, was swept by a most destructive cyclone, causing an appalling loss of life, and wrecking about ten million dollars' worth of property. Galveston was first settled in 1837, and had in 1900 a population of 37,789.

Galway.—A maritime county of Connaught, Ireland. Pop. (1901), 192,146.

Galway cattle, 4, 16.

Gama, Vasco da.—A famous Portuguese navigator, born about 1469 and died in 1524. His achievements form the theme of the national epic of Portugal—the "Lusiad" of Camoens. His enterprise led him to discover the sea-route to India *via* the Cape of Good Hope, previously attempted by Bartholomew Diaz. He undertook two expeditions by this route, in 1497-99 and in 1502-03, in both of which he reached and landed at Calicut, on the Mala-

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- bar coast of India, where he established a factory, or trading-place, in Mozambique and in 1524 was made Portuguese viceroy of India. Considering the merit of his discoveries, he may be said to rank only second to Columbus.
- Gambetta Léon.**—A French statesman of Jewish origin, born in 1838 and died in 1882. After the Franco-German War and the surrender of Napoleon III., Gambetta took a prominent part in proclaiming the republic and in opposing the German occupation of Paris. Before the capital surrendered, he escaped in a balloon and practically became for a time dictator of France. On the fall of the Commune he was elected a member of the National Assembly, then became president of the Chamber, and finally Premier, in 1882, the year of his death, the result partly of an accident. By profession he was a lawyer and advocate.
- Gambia.**—A river and British colony in Senegambia, part of the West African settlements of the English crown. The river has a length of 1,400 miles and falls into a noble estuary of the Atlantic at Bathurst. It is navigable as far as Barraconda. The colony has an area of 69 square miles which adjoins extensive protected territories in the interior. Its chief products and exports include India-rubber, groundnuts, rice, cotton, corn, hides, and beeswax. The population (1899), 15,000, is chiefly of Mohammedans and natives. The chief town is Bathurst, on the island of St. Mary (population, 6,000).
- Gambier Islands.**—A group of small islands in the South Pacific; under a French Protectorate
- Game fowl**, 4, 105.
bantam fowl, 4, 107.
- Game Laws.**—Laws to regulate the killing of game. In former times in England, all game was considered the property of the king, and those who infringed upon the royal rights in this direction were punished. In the U. S. a license may be secured by anyone wishing to hunt during the proper seasons; no one, however, may kill game during what is called the "close season" without incurring the risk of punishment.
- Games and Sports**, Indoor, 6, 47.
for children, 2, 151.
- Gamp Mrs. Sairey.**—A famous character in Dickens's "Martin Chuzzlewit."
- Ganesa**, 10, 28.
- Ganges.**—The sacred river of India, next to the Indus and the Brahmaputra in length. Its remote source is in the Himalayas, the main stream extending for a distance of 1,600 miles, and flowing mainly southeastward into the Bay of Bengal, which it reaches by many mouths. Its chief tributaries are the Jumna, Gandak, Kusi, Gogra, and Ramgunga, and on or near its mighty highway are the cities Calcutta, Patna, Behar, Benares, Allahabad, and Murshadabad. The delta of the river begins about 200 miles from the Bay of Bengal, the widest and deepest outlet being that known as the Hugli. Much of its adjacent low-lying land is inundated by the river in the summer and autumn months. The river is held in high veneration by the native Indians, and is indeed worshiped by them as the goddess Ganges.
- Ganges**, Fabled origin of the, 10, 12.
- Ganglion**, 1, 284.
- Gangue**, 5, 460.
- Gannet**, 4, 234.
- Ganymede.**—According to Greek legend, the most beautiful of mortals, son of Tros, first king of Troy, and the supplanter of Hebe in her rôle as cup-bearer to Zeus. In art, he is represented as being carried off by Zeus, in the form of an eagle, and given place among the immortals in bliss. In the Zodiac, he is represented by the sign Aquarius, or water-bearer: other tradition makes the beautiful young Trojan the presiding deity of the Nile.
- Ganymede**, 10, 87.
- Garcia, or Garzia, or Garcias.**—(958-1001.) King of Navarre, 995-1001.
- Garcia y Iniguez. Calixto**, 12, 267.
- Garden**, 1, 38.
Child should have a, 2, 126.
Value of a, 1, 9.
to a child, 2, 284.
- Garden of the Gods.**—A district near Colorado Springs, Col., comprising about 500 acres, covered with extraordinary rock formations.
- Garden of Virginia.**—The Shenandoah Valley.
- Garden Parties**, 1, 58.
Refreshments at, 1, 58.
- Garden State, or Garden of the West.**—A name sometimes applied to Kansas.
- Gardens of Babylon**, Hanging, 10, 182.
- Gardiner, Samuel Rawson.**—Born, 1829. An English historian.
- Gardiner's Island.**—A small island lying off the coast of Long Island, New York.
- Garesché, Julius P.**, 11, 256.
- Garfield, James A.**, at Williams College, 8, 138.
Education and early struggles of, 8, 63.
Life of, 12, 268.
referred to, 12, 181; 14, 30.
Term of, 12, 160.
- Garibaldi, Guiseppe**, Life of, 10, 467.
referred to, 10, 466; 11, 4; 14, 150.
- Garland, Augustus Hill**, 11, 526; 12, 273.

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Garland Case, 12, 273.

Garland, Hamlin.—American poet, novelist, literary, dramatic, and art critic, born in La Crosse county, Wis., in 1860. Much of his early life was spent in the West; later, he lived in New England.

Garlic.—A plant with a pungent aromatic taste and odor, used as an article of food, especially in Spain. It possesses some medicinal properties, being tonic, stimulant, diuretic, and sudorific.

Garnet.—A precious stone, the carbuncle of the ancients, found chiefly in Ceylon, Saxony, Bohemia, and northern Europe, as well as in Peru and Brazil. It is a mineral, a compound of several silicates, found among crystalline rocks, and, though hard, is brittle and has a vitreous luster. It occurs in mica slate, hornblende slate, in gneiss, granite, and sometimes in lava. It is of various colors, the more common being a clear deep-red, occasionally of an emerald shade, and sometimes black. The best stones are those known to the lapidary as Syrian garnets. The common form is the dodecahedron crystal.

Garnet, January birthstone, 1, 196.

Garnett, Robert Seldon.—(1820–1861.) A Confederate general in the Civil War.

Garonne.—A river of southern France, having its source in the Spanish Pyrenees, whence it flows in a northeasterly direction as far as Toulouse, then northwesterly, through Gascony and Guienne, past Bordeaux into the estuary of the Gironde and the Bay of Biscay. It is 350 miles in length, and is navigable for two-thirds of the distance. It receives a number of affluents, the largest of which is the Dordogne. At Toulouse it is connected by a canal with the Mediterranean. Roughly speaking, the river is the boundary between the Celtic and the Basque population of France.

Gar-pike, 4, 304.

Home of the, 4, 304.

Spawning of the, 4, 304.

Garrett, William M., on "Training Railroad Men," 5, 409.

Garrick, David.—A celebrated English actor, born in 1717 and died in 1779. After a short period at school, where he was for a time a pupil of Dr. Samuel Johnson, he found his way to London, and there manifested a fondness for the stage. After several appearances in minor parts on the boards, he achieved his first success as Richard III., in Shakespeare's historical play of that name. This occurred in 1741, and his after-career was a succession of triumphs, for he was popular alike in comedy as in tragedy. In 1747, he became manager of

Drury Lane theatre in London, which he continued to direct till 1776, when he retired with a handsome fortune. As an actor, he has since had but one rival—in Edmund Kean.

Garrick, David, referred to, 14, 24.

Garrison, William Lloyd, 12, 1.

Wendell Phillip's oration at the funeral of, 12, 3.

Garter, Order of the.—A famous military order of Europe, instituted by King Edward III., of England, about 1344.

Gas.—A fluid occurring either in the elastic or aëriform state, a term primarily used by chemists as synonymous with air, or in its permanently elastic form, such as oxygen, hydrogen, etc., in contradistinction to vapors as steam, which become liquid on a reduction of temperature. For lighting and heating purposes, gas is artificially produced by the destructive distillation of gas coal, and sometimes of peat, wood, oil, resin, etc. It has of late been used largely in some districts in its natural form for fuel and illuminating purposes, and as such is derived from the coal measures. Coal gas came first to be used about the close of the 18th century, when it was distilled from coal by a miner in Cornwall, England. Some years later, it was used to illuminate a large factory in Birmingham, and by a Gaslight Company in London it was introduced in the British metropolis as an illuminant in houses, superseding oil. It has now become a vast industry, though in turn it is now being superseded by electricity. Highly bituminous coal is best adapted for gas-making. The richest gas-making coal will yield from 12,000 to 15,000 cubic feet of gas from a ton of coal, and of an illuminating power of about 40 standard candles. Gas is explosive only when mixed with air in the proportions of from 3 to 9 of air to 1 of gas. The use of the incandescent mantle, which greatly raises the illuminating power of the gas, and improvements in gas engines, have in a measure revolutionized the gas-lighting industry in recent years.

Gas, Illuminating, 5, 179.

Manufacture of, 5, 180.

Water, 5, 181.

Gas engine, 5, 273.

Gascony.—An ancient duchy of France.

Gaskell, Mrs. (ELIZABETH CLEGHORN STEVENSON).—(1810–1865.) An English novelist; best known by her "Life of Charlotte Brontë," and the story "Cranford."

Gas-light.—See GAS ILLUMINATING.

Gasoline, 5, 228.

Gastein, Convention of, 11, 7.

Gastrocnemius muscle, 1, 276.

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Gate City.—A name applied to Atlanta, Ga., and also to Keokuk, Iowa.

Gate of Tears.—The Arabic term for which is Babel-Mandeb, the strait which connects the Red Sea with the Indian Ocean and separates Arabia from eastern Africa. It derives its name "Gate of Tears" from the dangerous character of the navigation of its waters.

Gate of the Mountains.—A gorge through which the Missouri River flows through the Rocky Mountains, about 40 miles above Great Falls, Mont.

Gates, Horatio, 11, 98.

Gates, Sir Thomas, 11, 41.

Gates's willow in New York City, 4, 440.

Gathering of the Birds, Armenian fable, 3, 178.

Gatling, Richard Jordan, 12, 273.

Gatling Gun.—A repeating machine gun, which consists of a number of rifles revolving around an axis.

Gaugemela, 10, 189.

Gaul.—The anglicized name of Gallia, now called France. The original inhabitants were Celts. Under the sway of Julius Cæsar it became Romanized; but after the decay of the Roman empire German influence prevailed.

Gaul, Gilbert.—Born, 1855; an American painter of battle scenes.

Gauls invade Italy, 10, 212.

Gauss, Karl Friedrich.—(1777-1855.) A celebrated German mathematician.

Gautama, 10, 44.

Gautier Théophile.—An eminent French poet, critic, and prose writer, born in 1811 and died in 1872. With Victor Hugo, he early took part in the romantic movement in French literature, and in 1835 produced a notable novel, "MADEMOISELLE DE MAUPIN." Later on he traveled extensively in Europe, and wrote a number of delightful works describing his voyages and travels; he also produced two masterly critiques on Lamartine and Charles Baudelaire. He also wrote largely on art, numberless striking short stories, such as his "A Night with Cleopatra," and a longer novel, entitled "Captain Fracasse," besides several plays for the stage, and a large body of delicate and rich verse.

Gavarni (the *pseudonym* of SULPICE PAUL CHEVALIER.—(1801-1866.) A noted French caricaturist.

Gaveston, Piers.—Executed, 1312. Favorite of Edward II. of England, with whom he had been brought up from childhood.

Gawain, or Gawayne, Sir.—One of the principal Knights of the Round Table.

Gay, John.—Born, about 1685, died, 1732. An English poet.

Gay, John, writer of fables, 3, 195.

Gay-Lussac, Joseph Louis.—An eminent French chemist and physicist, was born in 1778, and died in 1850, a peer of France. For scientific purposes, in 1804, he made two daring balloon ascents (in one of which he reached a height of 23,000 feet), to enable him to make observations on the earth's magnetism, the moisture of the air, etc. His early researches were also of much value in determining gaseous laws, specific heats, gravities, and in the decomposing action of the voltaic pile. His tests were also notable in his special line as a chemist, especially in connection with ethers, alkalies, iodine, bleaching chlorides, cyanogen (of which he was the discoverer), and their combinations. For nearly a quarter of a century he was professor of physics in the Sorbonne, and later became professor of chemistry at the Jardin des Plantes.

Gaza.—A town of Syria, an important trade center. Anciently one of the five principal cities of the Philistines. Pop., about 16,000.

Gaza, 10, 204.

Gazaland.—A portion of Portuguese East Africa, lying between Mashonaland and the sea.

Geary, John White, 12, 4.

Gecko, 4, 251.

Characteristics of the, 4, 251.

Flying, 4, 252.

Habits of the, 4, 251.

Geese, The, Russian fable, 3, 208.

Geikie, Sir Archibald, 10, Chester Terrace, Regent's Park, N. W. London, (1836—) a geologist of great distinction and many honors; director-general of the Geological Survey of the United Kingdom (Great Britain).

Geissler, Heinrich.—(1814-1879.) A German maker of physical apparatus and the inventor of tubes containing rarefied gas through which electric discharges are passed, causing varying effects of color and light.

Gelatin, Blasting, 5, 205.

Gelderland, or Guelderland, or Guelders.—A province of Netherlands, bordering upon the Zuyder Zee.

Gem of the Antilles.—A fanciful name applied to the Island of Cuba.

Gemini, the twins, a constellation, 5, 142.

Gems (from Latin *gemma*, a precious stone) have from ancient times been valued for personal adornment, as well as for engraving on, in relief (cameo engraving), and for intaglio or sunk engraving. The forms most in use for gem engraving were the colored and banded quartz and colorless rock crystals, though the precious stones, such as emeralds, sapphires, rubies, garnets, beryls, etc., were also held in

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- nigh esteem. For the authorities on gem engraving among the ancients, including the Egyptians, Assyrians, Etruscans, Phœnicians, Greeks, and Romans, see King's "Handbook of Engraved Gems." The production of artificial gems has now become a great industry, aided by tests and researches of the chemists and lapidaries. Imitation gems were also known to the Romans, who used to produce, among other mock gems, good imitations of the emerald and lapislazuli. In Egypt, research has discovered the location of Cleopatra's emerald mines, in a mountain east of Edfu, about 15 miles from the Red Sea. Burma has also yielded largely of precious stones, chiefly of rubies. In this country, some large sapphires have been mined in the Yogo Valley country, in Montana. The import trade in precious stones is a large one in the United States, the value of the imports in 1899 being over seventeen million dollars.
- General, 12, 273.**
- Generation, Dual nature of, 2, 392.**
- Generosity, Training in, 2, 273.**
- Genesee River.**—A river in N. Y., flowing into Lake Ontario, noted for its picturesque falls.
- Genesius, Josephus, or Josephus Byzantinus.**—A Byzantine historian; lived about 950.
- "Genesta."**—An English cutter, built expressly to win back the America's cup, but was twice beaten by the "Puritan" (Sept. 14 and 16, 1885).
- Genet, The recall of, 11, 181.**
- Geneva.**—A town in N. Y., the seat of Hobart College. Pop. (1900), 10,433.
- Geneva.**—An important and wealthy city of Switzerland, lying on both sides of the Rhône, where it leaves the Lake of Geneva. It has many fine buildings, including the Cathedral of St. Pierre, a university which dates from the year 1368, several academies, museums, picture galleries, and a Hôtel de Ville in the Florentine style of architecture. The city is a favorite and interesting one for artists, tourists, etc., for it has had a long and historic career back to the 1st century of the Christian era. Later it was a Roman city, then the capital of the Burgundian empire, and subsequently became the center of the Reformation movement under Calvin. For a time it was incorporated with France, but in 1815 both city and canton entered the Swiss confederation. Population of the city (1900), 104,044.
- Geneva Convention, 12, 273.**
- Genghis Khan, 10, 154.**
- Genius defined, 2, 171.**
- Genoa.**—The chief commercial city and seaport of Italy, situated at the foot of the Apennines, on the Gulf of Genoa. In early Roman times it was a great maritime port, has always done a large trade with Levantine towns, and during a period in its history did a lucrative commerce with India and other rich possessions in the East. It has several fine palaces and magnificent churches (the Cathedral of San Lorenzo being the most notable), a university, many museums, picture galleries, theaters, etc. Owing to local party struggles and the rise of other and more virile modern nations, Genoa has lost all her foreign conquests and possessions. Pop. (1899), 237,846.
- Gens d'armes** (*zhän-därm'*) were originally the French king's horse guards. The term means "men-at-arms." Now they are military police and comprise both cavalry and infantry. The position is regarded as a sort of reward for soldiers from the regular army who have won distinction by good conduct and length of service.
- Genseric.**—A king of the Vandals in Spain, who, in 429 A. D. invaded Africa, and ten years later, on a subsequent expedition, captured Carthage and made it the capital of a Vandal kingdom in Africa. So reckless and wasteful were the armies Genseric led through the lands he traversed and pillaged that the term "vandal" is now a synonym for destructive barbarism. Creating in the Mediterranean a great naval power, he fell upon Rome in 455 A. D. and plundered it for two weeks in the most ruthless fashion and carried away from it many captives. Like other conquerors in history, he was ever greedy of conquest, and made religion (he professed the Arian creed) the excuse for his cruelty.
- Genseric, the Vandal, plunders Rome, 10, 232.**
referred to, 10, 402.
- Gentian, Fringed, 5, 29.**
Symbolism of, 1, 199.
- Genucius, 10, 211.**
- Genus and Genea, gods of Phœnicia, 10, 80.**
- Genzburg, 9, 411.**
- Geographer of the United States, 12, 274.**
- Geography** (from two Greek words, one (*gē*), meaning "the earth," the other (*grapho*), "to write").—Literally, a description of the earth. Descriptive geography includes an account of the earth's surface, the climate and natural features and productions of the world in its different divisions, including not only plants, but animals and man, and the social and political condition of the various peoples of the world. The latter is otherwise termed political geography, in contradistinction to physical geography. The latter, again, is classified

into two branches, known technically as it refers to the natural features of the land as *physiography*, and, where it relates to the waters, and describes and measures the seas, lakes, rivers, and their phenomena, this is termed *hydrography*. Both terms belong to physical geography, in contrast to political geography, which deals with the earth as the abode of human races, communities and societies, their modes of government, population, and resources, etc. Mathematical geography is still another term, and this treats of the earth as a solar system, its movements of rotation in space around the sun, the causes of its seasons and daily changes, as well as of the location of portions of the land's surface, with its longitude and latitude, etc. Topography has to do with the local and minuter features of both land and water; while cartography is the science which represents or sets these features down on charts, maps, atlases and globes.

GEOGRAPHY, COMMERCIAL.—In whatever line of business one may obtain employment, he will find the geography of his state and country to be among those subjects with which he must acquaint himself in order to discharge his duties with intelligence and competency. The subject may be divided into several classes, viz., mathematical, physical, political, and commercial, and inasmuch as the first three of these are discussed in other pages of our work, it is the last mentioned of which it is our purpose here to treat, especially in its relation to *carriers* and the routes which they traverse.

In a work of this character it is obviously impossible to give a treatise so comprehensive as to afford all the information necessary in every case that may arise; indeed, it is believed that such a work does not exist. But a general idea of the subject will at least form a basis for whatever details it may become necessary to acquire.

The term "carriers," in its popular sense, comprises those engaged in the transportation of passengers, freight, and information, and the mediums employed may be classified as follows: railroads, waterways, telegraph, and telephone lines. Each of these will be treated separately.

RAILROADS.

A glance at a railroad map, with its labyrinth of lines penetrating every corner of the country, crossing and re-crossing each other, and stretching over the area of one or more states, cannot fail to produce a sensation of

confusion, but if we proceed systematically, examining and acquainting ourselves with each section of the territory traversed, a fund of information may be acquired without much trouble or loss of patience.

It may be fairly assumed that every one is informed as to what railroads touch the hamlet, town, or city in which he resides. He should not stop there, however, but should proceed to ascertain the routes of such roads, noting carefully the territory covered by them, the important cities located on them, and their termini. He should then proceed to learn by comparison which of the lines that reach the same places, especially the larger centers, employs the most direct route from his place of residence. Having done this, another section of the country should be selected for study. If the student be employed in a business the character of which is such that the railroads extending to a particular section of the country are used in the conduct of its business, he will, of course, take especial pains to become informed of all the conditions affecting such section. He will learn the names of such roads and their connections. If the particular section be distant, he will observe which of the great through or "trunk" lines would be the most advantageous to employ. At least one of such great lines penetrates every state of the Union.

It is, however, necessary that a knowledge of all sections should be gained, and, as stated, this should be done by examining one section at a time. Mark well which of the lines extend to the large cities and trade centers of the country. Imagine that you desire to travel, or to ship goods, from New York to Los Angeles and ascertain which route would be the most desirous. Again, suppose you desired to travel from one of the above-mentioned points to the other, but that you wished to reach some point located between the two that could not be reached by taking the most direct route. In these cases you will, of course, disregard the smaller roads which traverse only one or two states, and ascertain the trunk line or lines which cover the territory between the point of starting and the point of destination. Then try a trip from Buffalo to Jacksonville; from Washington to Houston; from Chicago to Seattle; from Baltimore to Kansas City; from Atlanta to Memphis; from New York to New Orleans; from San Francisco to Philadelphia; from Ft. Leavenworth to Cincinnati; from Cleveland to Denver, etc.

The student will do well to note the list of centers of large industries given below.

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using the place named as one terminus and his own residence or one or more of the large cities as the other, and ascertain the best route to be used.

CENTERS OF LARGE INDUSTRIES.

Worcester, Mass.—Extensive manufacturing industries.

Fall River, Mass.—Cotton mills. The annual output of the cotton mills in this city is equal to three-fourths of the gold mined yearly in the United States.

Lowell, Mass.—Cotton mills; proprietary medicines.

Lawrence, Mass.—Woolen and cotton factories.

Lynn, Mass.—Great shoe manufacturing center.

Holyoke, Mass.—Paper mills.

Bangor, Me.—Great lumber market.

Manchester, N. H.—Large cotton mills.

Bridgeport, Conn.—Manufacturing industries.

Waterbury, Conn.—Brass manufactories.

Scranton, Reading, and Erie, Pa.—Large iron works.

Newark, N. J.—Tanneries; jewelry.

Paterson, N. J.—Largest silk factories in the United States.

Trenton, N. J.—Potteries.

Dover, Del.—Fruit canning.

Richmond, Va.—Tobacco manufactories.

Wheeling, W. Va.—Nail works.

Parkersburg, W. Va.—Large trade in oil.

Raleigh, N. C.—Leading cotton market.

Charleston, S. C., and Wilmington, N. C.—Export more rosin and turpentine than any other two ports in the world.

Atlanta, Ga.—A southern trade center.

Charleston, S. C.—Ranks next to New York and New Orleans in the export of cotton.

Akron, O.—Large rubber works, and book manufacturing plant.

Augusta, Ga.—Largest cotton mills in the South.

Key West, Fla.—Manufacture of cigars.

Pensacola, Fla.—Lumber.

Birmingham, Ala.—Extensive manufacture of iron and steel.

Memphis, Tenn.—Important cotton port.

Chattanooga, Tenn.—Iron and steel industries.

Shreveport, La.—Large cotton market.

Little Rock, Ark.—Cotton-seed oil.

Fort Smith, Ark.—Great trade center.

Columbus, O.—Carriage manufactories.

Youngstown, O.—Iron and steel industries.

Fort Wayne, Ind.—Important trade center.

South Bend, Ind.—Wagons and plows.

New Albany, Ind.—Extensive glassworks.

Grand Rapids, Mich.—Large furniture factories.

Saginaw, Bay City, and Muskegon, Mich.—Lumber.

Racine, Wis.—Farm implements.

Des Moines, Iowa.—Grain market.

Duluth, Minn.—Important shipping center.

Topeka, Wichita, and Leavenworth, Kan.—Important centers for grain and cattle.

Pueblo, and Leadville, Col.—Large smelting works.

Los Angeles, Cal.—Large fruit market.

Cheyenne, Wy.—One of the largest cattle markets in America.

WATERWAYS.

Under this head may be included the two great oceans, rivers, lakes, and canals.

The Atlantic Ocean, sweeping the entire eastern coast of the country and extending to many European ports, affords magnificent commercial facilities for domestic and foreign trade. In domestic transportation where time is not the most important element, the ocean routes are used on account of the lower rates. This is an advantage which is enjoyed by but comparatively few states. Reliable steamship lines, operating safe and commodious vessels, extend between the important seaports, handling enormous cargoes. The most important of these routes are from New York to Norfolk and other Virginia ports, to Baltimore, and to Savannah; from Boston and Newport to Norfolk and to Savannah; and from points on the Chesapeake Bay (an arm of the Atlantic) to Charleston, Savannah, and other southern ports.

The western coast of the United States is also blessed with great transportation companies, whose steamers ply the Pacific Ocean for the purpose of carrying passengers, mail, and freight between the various important ports in California, Oregon, and Mexico. At the present time all the travel to Alaska from northwest America is by the way of these routes.

By referring to a map showing the various domestic ocean steamship lines, the student will be enabled to familiarize himself with all important facts pertaining to the subject.

The lines commanding transportation to and from foreign ports extend principally from New York and Philadelphia to ports in

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Great Britain and the continent of Europe, and thence to the northern, western, and eastern coasts of Africa, and also to South American ports. From Florida and the Gulf States routes extend to the West Indies and Central America. Direct lines are also maintained from New York to these points.

The most direct route from the United States to points in the Orient is from the western coast, San Francisco being the most famous in this regard. The lines employing this route extend to the Philippine Islands, China, Japan, and India, and also to Hawaii and the Cape Verde Islands.

Throughout the interior of our country flow mighty rivers, which form highways of trade and travel. The most important of these, perhaps, is the Mississippi, which commands the patronage of many of the middle, northern, and southern states, extending, in the main, from St. Paul to New Orleans, at which latter point connection is made by it with the Gulf lines.

The Missouri River commands Topeka, Kansas City, and important cities in Missouri, tapping the Mississippi some distance north of St. Louis.

Another outlet of the Mississippi is the Ohio River. This highway leaves the Mississippi at Cairo, Ill., and commands all points on the southern boundaries of Illinois and Indiana and the southern and eastern boundaries of Ohio.

The Rio Grande flows from southern Colorado through New Mexico, dividing the state of Texas from Mexico and emptying into the Gulf.

The Colorado River extends from Western Colorado through Utah and divides the states of Nevada, Arizona, and California, thence to the Gulf of California.

The Hudson River is another important interior waterway. It is the means by which a vast amount of the business of New York City is conducted. From New York it extends northward to the large cities in the state of New York; notably Poughkeepsie, Albany, Troy, and Schenectady.

The St. Lawrence River is an important outlet of Lake Ontario, extending in a northwesterly direction into the Dominion of Canada.

Of the lakes which afford excellent transportation facilities those known as the Great Lakes are the only ones deserving special mention. They are Lake Superior, Lake Michigan, and Lake Huron, and they are

connected with each other by a narrow strait. Over these lakes are daily transported multitudes of people and tons of freight between the states of Minnesota, Illinois, Michigan, and New York, and the Dominion of Canada.

Much use was made of canals in this country in former times, but owing to the growth of surface transit, they are being rapidly eliminated. Being of an almost purely local character, it is hardly possible to do more than to recommend a study of the geography of those that happen to be in the student's vicinity.

TELEGRAPH AND TELEPHONE LINES.

There are but two great systems of telegraph in this country, viz., the Western Union and the Postal, and by their lines messages may be sent to almost every point that can lay claim to having a name. The larger of these systems is the Western Union, but the Postal system is rapidly extending its facilities, thereby becoming as great a factor in the conduct of business as the Western Union.

In addition to these carriers, there is a multitude of telephone lines which, in addition to transmitting local messages, are now extending their plants in such a manner as to enable them to perform, to a certain extent, the functions of the telegraph companies.

Any one intending to enter a business life, or having done so, will do well to seek information that will qualify him to know the points that are reached by each of the telegraph and telephone lines, their relative rates of transmission, and which of them possesses the facilities that will be of the most advantage in the particular line of business in which he seeks employment. After familiarizing himself with the conditions affecting his immediate neighborhood, his research should be extended to his entire state and then to the country at large.

The foreign telegraphic carriers are known as "cable companies," and their lines extend to all inhabited parts of the world. Messages destined to foreign points may be filed with the domestic telegraph companies at any of their offices. Such messages are transmitted by them over domestic territory and delivered to the cable company at the nearest ocean port for transmission through the submarine cables.

CURRENT POLITICAL CONDITIONS.

This subject affords a most important and useful field of information to those who desire to engage in a business avocation without spending the time and energy necessary to become thoroughly schooled in the subject of

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political economy. One may keep in touch with current conditions, so far as they affect the business world, and his attention should be turned not only to such as arise within, or affect, the municipality in which he may be employed, but more particularly to those matters which grow out of state and national politics.

It may be said that no political condition ever arises that does not, directly or indirectly, materially affect the world of business, and he who has an understanding of the relations between such conditions and their results will be far better equipped for employment than he who knows not whether we are under a protective tariff or under free trade, or whether the government is issuing money on a single or a bimetallic basis, or what the results of such conditions may be.

Keep informed, then, as to tariff regulations, the nature and extent of their effect upon business in general and upon the particular kinds of business that are more materially affected by them. The same should be done as to internal revenue, conditions affecting combinations of capital, and the relations between master and servant, the acquisition or release of territory by the Federal Government, the coinage of money, the issuance of Government securities, and such other matters as may arise.

Be familiar with the various political parties and the attitude of each upon the questions of the day; the personnel of the government of your state, and of the Federal Government; the names of those men who are prominent in public life, the causes of their prominence, and with what questions their names are especially identified.

Geological Surveys, 12, 274.

Geology (Greek *gē*, the earth, and *logos*, a discourse) is the science which treats of the structure, surface, configuration, and composition of the earth—of the different strata which compose its crust, their order of succession or deposition through eons of time, the characteristic forms of their fossilized animal and vegetable life, etc. As a science, it is of comparatively recent date, and is full of interest, not only in its revelations of what in the nature of rocks, metals, and the solidified remains of early life, are to be found in the bowels of the earth, but as these throw light upon the earth's history in the long ages of the past. Geology time is divided into ages, eras, periods, and their subdivisions, and attempts to reveal their successive order from the earliest and lowest

strata, beginning with the Archæan, with its Laurentian and Huronian deposits, up through the Silurian (the age chiefly of invertebrates), the Devonian (the age of fishes, and of the Old Red Sandstone formations), the Carboniferous (the coal measures era), to the Mesozoic and Cenozoic eras (the age of reptiles and mammals—of oölites, chinks, and the marks of glacial movement and erosion). The subdivisions of the science are Dynamic Geology, which treats of the agents and forces which have been at work in making the earth as we know it, the actions of climate, atmosphere, seas, volcanoes, etc.; Structural Geology, which treats of the rock formations and strata and their relations to one another; Paleontologic Geology, which deals with fossils, etc.; Physiographic Geology, which has to do with the present form of the earth's surface; and Economic Geology, that phase which treats of the commercial value of minerals to man, such as ores, coal, clay, petroleum, gas, salt, building stone, marble, etc.

Geology, 5, 422.

Ages or Divisions of, 5, 461.

Azoic or Archæan era, 5, 461.

Carboniferous age, 5, 464.

Cenozoic age, 5, 466.

Destructive surface agencies, 5, 427.

Eozoic age, 5, 462.

Historical, 5, 461.

Lower Silurian age, 5, 463.

Mesozoic age, 5, 464.

Paleozoic age, 5, 462.

Reconstructive forces on the earth's surface, 5, 430.

Structural, 5, 432.

Upper Silurian age, 5, 464.

Geometrical Drawing, 7, 239.

George, Henry.—(1839–1897.) A distinguished writer on political economy and sociology. He began life as a sailor. In 1858 he took up his residence in California and engaged in newspaper work. In 1879 he published, "Progress and Poverty" which attracted great attention. He lectured in England and Scotland; in 1886 he was nominated for mayor of the city of New York by the United Labor Party. His last work was an extensive and thoughtful treatment on "Political Economy." He was a great advocate of the justice of the single tax.

George, Henry, on "Early Marriage," 1, 231.

George, Lake.—Situated in eastern N. Y., noted for its beautiful scenery. It was the scene of several engagements in the French and Indian and the Revolutionary wars.

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George, Saint.—A half legendary, half-historical character, supposed to be born of Christian parents in Cappadocia. For his faith he is said to have suffered martyrdom in Nicomedia in 303 A. D., and hence was held in high honor by the Church during the Middle Ages. Another account of him locates him in point of time towards the close of the 11th century, when he is said to have taken part in the early Crusades and aided them at Antioch against their foes the Saracens. For this reason, he became patron of the Normans, and during Edward III.'s reign, in the 14th century, he was adopted as the patron saint of England. A well-known legend connects him with an encounter and conquest of the dragon (the devil), the subject of a notable painting by Raphael (1506) in a museum at St. Petersburg.

George Eliot.—The pseudonym of Mrs. Cross, British novelist, which see.

George I. of Greece.—Georgios I., reigning king of Greece, the ancient Hellas, was elected "King of the Hellenes" by the National Assembly at Athens in March, 1863. He is the second son of the present king of Denmark (Prince Christian of Schleswig-Holstein), and in 1867 married Olga, eldest daughter of Grand-duke Constantine of Russia, brother of the late Emperor Alexander II. Greece, which had been a province of the Turkish empire since early in the 16th century gained its independence in 1829, and was declared a kingdom in the following year under the protection of Britain, France, and Russia. By special permission, George I. is allowed to adhere to his Protestant Lutheran faith, though his successors must be members of the Greek Orthodox Church.

George Sand.—See SAND, GEORGE.

Georges, The Four English, 10, 338.

Georgetown.—A port of entry and part of the city of Washington, D. C., situated on the Potomac. It was incorporated with Washington in 1878, and is now known as West Washington.

Georgia.—One of the southern states of the Union and the latest to be settled of the thirteen original states, has an area of close upon 60,000 square miles. It was first settled by English colonists in 1733, and became a royal province in 1752. It seceded in 1861 at the outbreak of the Civil War, and was readmitted into the Union in 1868, after it had become the theater of considerable fighting around Chattanooga and Atlanta and by the passing of Sherman on his famous march through the heart of the state to the sea.

Georgia is one of the chief cotton-producing states, and has now considerable manufactures, mainly of cotton, woollens, and iron. Rice is also one of its products, besides lumber and coal. In the north the surface is elevated and mountainous, but in the south and center it is level or undulating. It has 137 counties and sends 2 senators and 11 representatives to Congress. Atlanta (pop., 89,872) is the capital. Its chief seaport is Savannah (pop., 54,244). Population of the state (1900), 2,216,331.

Georgia, Army of, 12, 4.

"Georgia," The, 12, 4.

Geradini, 14, 38.

"Georgics."—By Virgil, a poem in four books.

Geranium.—A genus of plants comprising 500 species. They are propagated by seed or cuttings. A mixture of leaf mold and sand is most suitable.

German Art, Modern, 9, 327.

boar-hound, 4, 19.

German Colonial Possessions.—Since 1884 Germany has made great strides as a Colonial Power, acquiring possessions in foreign countries, chiefly in Africa and among the islands of the Pacific Ocean. These now embrace a total of over a million square miles, with an estimated population of close upon 15,000,000. Besides these she has acquired in China the port and protectorate of Kiau-Chau, in the province of Shantung. In Africa are her chief possessions, which include Togoland, Kamerun, German East Africa, and German Southwest Africa. In the Pacific, she has acquired Savaii and Upolu of the Samoan group, besides Kaiser Wilhelm's Land, Bismarck Archipelago, Solomon Islands, Palaos, of the Pelew group, the Marshall Islands, the Caroline, and the Marianne Islands. The government of these possessions is chiefly in the hands of Imperial and Deputy Commissioners.

German Emperor, King of Prussia becomes, 11, 10.

Empire, Unification of the, 11, 9.

fables, 3, 192.

fairy tales, 3, 87.

national fleet sold at auction, 11, 6.

silver, 5, 211.

Germantown (Pa.), Battle of, 11, 98.

Germany is a confederation of German states under the presidency of the Emperor William II. of Hohenzollern, king of Prussia. The confederation embraces 25 states, with one imperial province (Alsace-Lorraine), the entire area of which is 208,830 square miles in the central portions of Europe, with a total population, in 1900, of 56,345,014, or 269.3 to the sq. mile. A few of the chief cities of the em-

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- pire are Berlin (pop., 1,884,151), Hamburg, Munich, Leipsic, Breslau, Dresden, Cologne, Frankfort-on-the-Main, Nuremberg, and Hanover, with populations, in the order given, ranging from 700,000 down to 235,000. Education throughout Germany is general and compulsory; besides special and technical schools, and those in which elementary and advanced education are taught, as in the Gymnasia, the Realgymnasia, Realschulen, etc., Germany has 21 universities, the chief of which are the universities of Berlin, Munich, Leipsic, Bonn, and Breslau. Political and military affairs are under the direction of the emperor, who may declare war, but if not defensive, the consent of the Bundesrath or federal council is required. The legislative functions of the empire are vested jointly in the Reichstag (which represents the German nation and consists of 397 members) and the Bundesrath (which represents the individual states of the union and consists of 58 delegates appointed by the governments of these states for each session). The Protestants form 62.7 per cent. of the population and the Roman Catholics 35.9 per cent., the Jews making up 1.2 per cent. of the remainder. The revenue is derived from the customs and other imperial sources, and the balance is made good by contributions from the confederate states. For the colonies, see GERMAN COLONIES.
- Germany, 10, 275.**
 First step toward the unity of, **11, 5.**
 National Liberal Party, **10, 379.**
 takes possession of Kiao-chau, **11, 28.**
- Germinal, 13, 97.**
- Germination** (in plants).—The sprouting or budding, the beginning of vegetation or growth in a seed or plant. It is the process by which a spore, supplied with the necessary food matter in solution of heat and oxygen, germinates and develops a young plantlet, or organism, similar to the parent form. The process is other than that which occurs in the germination of seeds released from their seed-case, though the natural condition which favors the one favors the other.
- Germs of Disease, 5, 96.**
- Gérôme, Jean Léon.**—An eminent modern French painter, a pupil of Paul Delaroche. He was born at Vesoul, France, May 11, 1824, and after studying art in Paris and traveling extensively in the East, he became professor of painting in the Academy of Fine Arts at Paris. Many of his canvases deal with early and modern Roman subjects and are characterized by vivid coloring and strong dramatic effect. His best-known paintings are, "Roman Gladiators in the Amphitheatre," "Cleopatra and Cæsar," "The Age of Augustus and the Birth of Christ," "Slave Market in Rome," "Night in the Desert," and "Women at the Bath."
- Geronimo.**—A famous Indian chief of the Apache tribe; pursued by Gen. George Crook, captured by Gen. Nelson A. Miles in 1886, and sent to Fort Pickens, Fla.
- Gerry, Elbridge, 11, 140.**
- Gerrymander, 11, 140.**
- Gerster, Etelka.**—Born, 1856. A noted Hungarian soprano singer.
- Gerster, Etelka, 14, 24.**
- Geryon, the giant, 10, 107.**
- Gesture, 8, 454.**
- Gethsemane.**—A garden adjoining the city of Jerusalem, the resort of Christ and his disciples, and the scene of the agony of Our Lord before his crucifixion. It lies at the foot of Mount Olivet by the brook and valley of Kedron. Here, led by Judas, he was taken by emissaries of the Jews on the night of the betrayal. The name Gethsemane is derived from the Hebrew for "oil-press."
- Getty, George Washington, 12, 4.**
- Gettysburg, Battle of, 12, 4.**
- Geysers.**—A crater, crevasse, or bowl-shaped trough, from which at intervals columns of hot water, steam, mineral matter, and mud are ejected or erupted from underground caverns. They occur in volcanic regions, the more notable being in Iceland, whence they derive their name, also in New Zealand, and in America in the region of the Yellowstone National Park, in N. W. Wyoming. In the latter, the geyser familiarly termed "Old Faithful," which spouts, on an average once in an hour a column of hot, sulphurous water to a height of about 130 feet, is the best known in this country, together with its consorts, the giant, giantess, grotto, punch-bowl, and grand geysers. The eruptions are due to the expansion of steam, accumulating in the underground caverns, which pushes the superincumbent column of water upward and out of the geyser.
- Geysers, how formed, 5, 163.**
- Ghazipur.**—(1) In British India, a district in the Northwestern provinces. Pop., about 1,077,909.
 (2) The capital of the district of Ghazipur. Pop., about 45,000.
- Ghent.**—The capital of East Flanders, Belgium; an important trade center; and a city of much historical interest. Pop. (1899), 163,030.
- Ghent, Pacification of, 10, 299.**
 Treaty of, **11, 140.**

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Gherardi, Bancroft, 12, 275.

Gherkins, 5, 58.

Ghibellines, 10 277

Ghiberti, Lorenzo, 9, 343.

Doors of, 9, 369.

Ghirlandajo 9, 220.

Ghost of Solomon, German fable, 3, 194.

Giant's Causeway.—A promontory of the coast of Antrim, in Ireland, extending into the North Channel, which separates it from Scotland. The singular headland is composed largely of basaltic columns, mainly hexagonal in form, closely packed together, and formidable cliffs rising to a height of from 400 to 500 feet. The location of the Causeway is west of Bengore Head, about 11 miles N. E. of Coleraine. Locally the causeway is spoken of as the stepping-stones of the Fomorians, a race of pirates who once infested this part of the Irish coast, and whom legend has transformed into giants who desired, by means of these basaltic rocks, to form a causeway across the channel to the Scottish coast.

Gibbon, Edward.—A famous English historian, whose great work and high authority for the period it covers, is "The History of the Decline and Fall of the Roman Empire." One of the great masterpieces of history, the work is distinguished by the splendor of the author's prose, and by a glowing imagination which gives a special charm to the narrative, especially in the treatment of ancient paganism and the portrayal of the chief characters of the age with which it deals. Gibbon was born in 1737 and died in 1794. His "Autobiography" also deserves to be read by the literary student. See the monograph on Gibbon, by Morrison, in Morley's "English Men of Letters" series.

Gibbon, John.—(1827-1896.) A general of the U. S. army.

Gibbon, The, 4, 65.

Gibbons, Grinling, 9, 406.

Works of, 9, 406.

Gibbons, James Sloane.—(1810-1892.) An American banker and author; to some extent identified with the abolition movement. He was author of the war song, "We are Coming, Father Abraham, Three Hundred Thousand More."

Gibbons, Orlando.—(1583-1625.) A distinguished English organist and composer, especially of church music.

Gibbons versus Ogden, 11, 140.

Gibraltar (the classical Calpe, one of the Pillars of Hercules).—A rocky promontory and fortress of Great Britain in the south of Spain, the key to the Mediterranean. It is about two

miles square and over 1,400 feet in height, connected with the mainland by a spit of sand known as "neutral ground." The town and fine harbor are on the west side and are commanded by strong batteries. In early days, it was a Moorish stronghold, but has belonged to Britain since 1704, though repeatedly besieged by Spain subsequent to its capture. It is governed as a crown colony; the fortress has a garrison usually of 5,000 men. An engagement took place here in 1801 between French and English vessels of war. Population (1899), 24,701.

Gibraltar, 10, 237.

Gibraltar of America.—A name sometimes applied to Quebec.

Gibson, Charles Dana.—American Artist. 9, 333.

Gibson, John.—(1790-1866.) An English sculptor, 9, 409.

Gibson, John, 9, 409.

Gibson, Randall Lee, 12, 5.

Gibson, William Hamilton.—(1850-1896.) An American painter, illustrator, and writer.

Giddings, Joshua Reed.—(1795-1864.) Distinguished as an anti-slavery leader and politician.

Gifford, Robert Swain.—Born on the island of Naushon, Mass., 1840. A noted landscape painter.

Gifford, Sandford Robinson.—(1823-1880.) An eminent landscape painter.

Gifford, Sanford, 9, 331.

Gila Monster, 4, 253.

Home of the, 4, 253.

Gilbert, Alfred, 9, 410

Gilbert, John Gibbs.—(1810-1889.) A distinguished comedian.

Gilbert, Marie Dolores Eliza Rosanna.—(1818-1861.) An adventuress and dancer, better known as Lola Montez.

Gilbert, Mrs. George H.—(1814-1906.) A noted English-American actress.

Gilbert, Sir Humphrey, 11, 57.

Gilbert, Sir John.—(1817-1897.) A noted English painter.

Gilbertines.—A religious order established in England 1131-48.

"**Gil Blas de Santillane, Histoire de**."—The best known of the works of Le Sage (1668-1747), French novelist and dramatist.

Gilder, Richard Watson.—Born, 1844. An American editor and poet.

Giles, William Branch.—(1762-1830.) American Democratic politician.

Gill, André (the *pseudonym* of LOUIS ALEXANDRE GOSSET DE GUINNES).—(1840-1882.) A noted French caricaturist.

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- Gillis Land.**—A polar land lying northeast of Spitzbergen.
- Gillman, Charlotte Perkins,** on "If I Were a Girl Again," 1, 254.
- Gillmore, Quincy Adams,** 12, 5.
- Gilmore, Patrick Sarsfield.**—(1829-1892.) A noted Irish-American bandmaster and organizer of "Gilmore's Band."
- Ginseng,** 4, 477.
- Ginungagap,** 10, 118.
- Giorgio Andreoli,** artist in Majolica ware, 1, 218.
- Giorgio, Francesco di.**—(1439-1502.) A celebrated Italian artist, engineer, and worker in bronze.
- Giorgione,** 9, 245.
- Giotto,** 9, 218.
- Gipsies.**—A corruption of the word Egyptians, caused by the popular belief regarding the origin of this people. A wandering race who appeared first in England in the 16th century. They differ from other people in physical appearance and speech. It is thought that they are akin to ancient Hindu races. The name is indiscriminately applied to all wandering races.
- Giraffe,** 4, 92.
 Characteristics of the, 4, 92.
 Flesh of the, 4, 93.
 Habits of the, 4, 92.
 Home of the, 4, 92.
 Hunting the, 4, 93.
 Skin of the, 4, 93.
- Girard, Stephen.**—Born in France, 1750; died, 1831. A wealthy philanthropist. He founded Girard College at Philadelphia (1833-48).
- Girard College.**—An educational college for poor white male orphans, founded in Philadelphia, 1833, by Stephen Girard. By a provision in his will, "no ecclesiastic missionary or minister of any sect or denomination whatever" is permitted to officiate in the college; nor is he even admitted as a visitor.
- Gird, Richard,** 13, 448.
- Girl Again, If I Were a,** 1, 254.
 and boy friendships, 2, 197.
 The newspaper office a place for a, 7, 338.
 The highest type of, 1, 69, 252.
 When I was a Little, 2, 256.
 The College, 1, 71.
- Girls, Age to go to college,** 1, 72.
 Furniture for the room of college, 1, 73.
 Social side of college life, 1, 73.
 Wardrobe for college, 1, 72.
 Athletic, 1, 69.
 Capricious appetites of, 2, 444.
 Care during adolescence, 2, 446.
 Education different from boys, 2, 424.
 Education on marriage, 2, 433.
 Endurance compared with that of boys, 2, 443.
 False delicacy, 2, 434.
 Fatigue at school, 2, 103.
 Freedom for, 1, 70.
 Good manners in, 1, 70.
 Hygiene for, 2, 445.
 Now and Then, 1, 247.
 Physical, intellectual, and moral education of, 2, 424.
 Special education of, 2, 424.
 Study in home-making arts, 2, 435.
 physiology for, 2, 435.
 Training in house-keeping, 1, 69, 97.
- Gironde.**—A department of southwestern France; capital Bordeaux.
- Girondists.**—An important political body at the time of the first French Revolution.
- Girondists,** 10, 344.
- Girton, Thomas,** 9, 282.
- Girton College.**—An educational institution for women; situated at Girton, near Cambridge, England.
- Gist, State Rights.**—(1833-1864.) A general in the Confederate army during the Civil War.
- Gizeh, Pyramids of,** 10, 179.
- Glacial epoch,** 5, 466.
- Glaciers,** 5, 429.
- Gladstone, Rt. Hon. William Ewart.**—A distinguished British statesman, orator, and author, born in 1809, and died in 1898, and was buried with public honors in Westminster Abbey, London. He first entered Parliament in 1833, in the Conservative or Tory interest, and so favorably did the young orator and debater impress the House that Sir Robert Peel gave him the post of junior lord of the Treasury, and then that of undersecretary for the colonies, subsequently giving him the presidency of the Board of Trade. Peel's death in 1850 paved the way for an ample career, aided by his own abilities as a debater and financier. In the Aberdeen ministry he became chancellor of the exchequer, and at this time he had a formidable rival in Disraeli, afterward Lord Beaconsfield, an orator on the Tory side, for about this period Mr. Gladstone abandoned his conservative proclivities and became an ardent Liberal. Palmerston's death, in 1865, which called Lord Russell to the premiership, made Mr. Gladstone leader in the House of Commons. Henceforth he occupied the most conspicuous position in the politics of the time, which was later on marked by the legislation shaped by him as premier—a post he held at four different periods in his career, until his retirement in 1894. Among his notable

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- characteristics as a politician was his commanding personality, purity of motive, and honorable uprightness. During his career he did much for Ireland and ardently espoused her cause, especially in the disestablishment of the Irish Church and the granting to Ireland of the boon of Home rule. As an author Gladstone possessed remarkable gifts and he contributed much to literature.
- Gladstone, William Ewart**, 10, 383.
 Abandons the Sudan, 11, 18.
 power of mastering a book, 8, 171.
 referred to, 14, 23, 110, 207, 246, 387.
- Glasgow**.—The largest city of Scotland; second city of Great Britain, and third in importance of the British seaports. Pop. (1901), 735,906.
- Glass**.—A hard, brittle, usually transparent substance, made by fusing together sand or silica with lime, potash, soda, or lead oxide. It is to-day extensively used for window panes, mirrors, for lenses, as well as for many articles for table and culinary use, or for ornament. Its invention dates from an early era, being known to the Egyptians, Phœnicians, and Romans, as well as to the Arabs. Glass-making is a large industry in the United States, where it is made at Pittsburg and other districts in Pennsylvania, in Massachusetts, and in New Jersey and New York. The chief varieties made in this country are window, common and plate glass, flint or crystal glass, and bottle glass. The coloring of glass is produced by the use of certain oxides of metals.
- Glass**, 5, 199.
 Annealing, 5, 201.
 Antiquity of the manufacture of, 5, 199.
 Colored, 5, 201.
 Crown, 5, 200.
 de la Bastie method of annealing, 5, 201.
 Etching on, 5, 189.
 Flint, 5, 200.
 Manufacture of, 5, 200.
 Plate, 5, 201.
 Soluble, 5, 199.
 Water, 5, 199.
 Window, 5, 201.
- Glastonbury**.—In England, an historical town of Somerset, near Bristol.
- Glauber, Johann Rudolf**.—(1604–1668.) A noted German chemist; discoverer of Glauber's salts (hydrous sodium sulphate).
- Glauber's salts**, 5, 205.
- Glenoid fossa**, 1, 273.
- Glens Falls**.—A picturesque town of New York, situated at the falls of the Hudson. Pop. (1900), 12,613.
- Glinka, Mikhail Ivanoviitch**.—(1804–1857.) A noted Russian composer.
- Glisson, Oliver S.**—(1809–1890.) An American naval officer, commander of the schooner "Reefer" in the Mexican War.
- Globe, The**.—A famous old London theater; built 1599. Shakespeare wrote for this theater and appeared upon its stage.
- Glossopharyngeal nerve**, 1, 284.
- Gloucester, Mass.**—A city and seaport on the peninsula of Cape Ann, about 30 miles N. E. of Boston. It is noted for its extensive fisheries trade, chiefly in mackerel and cod, and in which over 5,000 men are annually employed. The "catch" in some seasons amounts to nearly 10 million pounds of fish, the vessels engaged in the trade numbering over 400, with a gross tonnage of about 40,000 tons. Gloucester was occupied as a fishing station as early as 1624, being the first settlement on the north shore of Massachusetts Bay. It has a fine harbor and beach. Pop. (1900), 26,121.
- Glover, Richard**.—(1712–1785.) An English poet.
- Glover, Stephen**.—(1812–1870.) An English musician and composer.
- Gloversville**.—A town in N. Y. Its chief industry, the largest of its kind in the U. S., is the manufacture of buckskin gloves and mittens. Pop. (1900), 18,349.
- Gluck, Christopher Willibald**, 9, 102.
- Glucose**.—Under this term are several distinct substances either directly or indirectly prepared from animal or vegetable products, such as dextrose, grape, and starch sugars, syrups, etc. They are derived naturally from ripe grapes, honey, cane sugar, etc., or from starch, by the action of heat and acids. Glucose is now largely manufactured in the United States, where it is used in the manufacture of table-syrups and confectionery, in the brewing of ale and beer, and in the preparation of a food for bees and of artificial honey. The glucose of commerce is thick and tenacious, of a slightly yellowish tint, though nearly colorless, and with a specific gravity, at 20° C. or 68° Fahr. of 1.412. Its sweetness varies with different specimens: that derived from cane sugar is the sweeter.
- Glucose**, 5, 233.
- Glue**, 7, 182.
 How to make, 7, 182.
- Gluteus maximus muscle**, 1, 275.
 medius muscle, 1, 275.
- Glycerin**, 5, 230.
- Glycyrrhiza glabra**, 5, 66.
 lepidota, 5, 65.

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- Gnostics.**—These were certain sects that appeared in the Christian church in the 1st century, reached their height in the 2d century, and disappeared in the 6th century. They refused the literal interpretation of the Bible and tried to weld onto Christianity some of the teachings of the Greek and Oriental philosophies.
- Goa, Old.**—A ruined city, in former times the capital of Goa, India; the seat of government (it is a Portuguese possession) was removed in 1759 to New Goa, a city of about 8,000 inhabitants. Goa is also a large district (a dependency of Portugal) on the Malabar coast of India.
- Goat, Angora, 4, 26.**
 Cashmere, 4, 26.
 Characteristics of the, 4, 26.
 Flesh of the, 4, 26.
 Hair of the, 4, 26.
 Ibex, 4, 26.
 Leather, 4, 26.
 Maltese, 4, 27.
 Milk of the, 4, 26.
 Rocky Mountain, 4, 31.
- Goat Island.**—The island in the Niagara River, which separates the Horseshoe and American Falls.
- Goatsuckers, 4, 155.**
 Syrian, 4, 27.
 Wild, 4, 26.
- Goats ask for horns, German fable, 3, 193.**
- Gobelin tapestry, 1, 36.**
- Gobelins.**—The descendants of Jean Gobelin who died in 1476; famous dyers of Paris and first manufacturers of tapestries, which they introduced in the 15th century.
- Gobi, or Cobi.**—A great desert of the Chinese empire.
- Godavari.**—(1) A district in Madras, British India: pop., about 2,000,000. (2) A river of British India; length, 900 miles.
- Godfrey of Bouillon.**—(1061–1100.) A leader of the first Crusade.
- Godfrey de Bouillon, 10, 258.**
- Godiva.**—The wife of Leofric, earl of Chester; lived about the middle of the 11th century; a woman of great beauty and piety. In order to secure for the people of Coventry relief from burdensome tax, she consented to ride, unclothed, through the town. A festival is still held in Coventry in commemoration of her sacrifice.
- Godkin, Edwin Lawrence.**—Born in Ireland, 1831. An American author and journalist.
- God of the Nile, 10, 74.**
- Godolphin, Sidney.**—First earl of Godolphin. Died, 1712. A noted English statesman and financier.
- Gods, Great number of Hindu, 10, 3.**
 Hindu elemental, 10, 31.
 of Asgard, 10, 119.
 of Egypt, Solar, 10, 67.
- God Save the King (or Queen).**—The English national anthem; origin uncertain; first performed in 1740.
- Godwin, or Godwine.**—Died, 1053. Earl of the West Saxons.
- Godwin, Mrs. (MARY WOLLSTONECRAFT).**—(1759–1797.) An English author.
- Goethe (gè'te) (JOHANN WOLFGANG VON).**—(1749–1832.) A celebrated German author, poet, and dramatist. He was a most voluminous writer, but is best known by his "Faust."
- Goethe's "Wilhelm Meister,"** quoted, 2, 312.
- Goetze, Hermann.**—(1840–1876.) A noted German composer.
- Gog and Magog.**—Two effigies in the Guildhall, London, thought to be intended for Gogmagog, a legendary king of the giants, and Corineus, a follower of Brut.
- Goggin, Miss Catherine,** on "If I Were a Girl Again," 1, 261.
- Gold.**—The most valued, and as the alchemists used to term it, the king of metals. It is a brilliant yellow metal, remarkable for its ductility and malleability; an ounce of it may be hammered out into 100 square feet of gold leaf, and 15 grains may be drawn into a wire over 2,000 yards in length. For the purposes of coinage, and that it may stand wear without loss, gold is alloyed with copper, silver, or other metals, and also in the manufacture of jewelry. The metal is remarkable also for its high specific gravity (19.3), and in this respect is next to platinum. Gold is widely distributed, being found largely not only in the United States and Canada (in the latter chiefly in British Columbia and on the Yukon), but in Australasia, in the Transvaal (though the product of the mines of the Witwatersrand has fallen off in the past two years, in consequence of the Boer War), in Russia, Hungary, Mexico, China, British India, British and French Guiana, Brazil, Chili, Colombia, and Peru. The total gold production of the world in 1900 was estimated as 12½ million fine ounces, valued at over \$250,000,000. Of this quantity and value the United States produced over one-fourth, the bulk of it coming from Colorado, California, and Alaska, with lesser quantities from New Mexico, Arizona, Montana, Idaho, Oregon, and Washington. Statistics of the Government Mint bureau

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show that in the year 1900 gold to the value of close upon a hundred million dollars was coined. This amount of gold represented the coinage of $6\frac{1}{2}$ million pieces, of the denominations of \$2.50, \$5.00, \$10.00, and \$20.00.

In round numbers, the weight of \$1,000,000 in standard gold coin is $1\frac{3}{4}$ tons; standard silver coin, $26\frac{3}{4}$ tons; subsidiary silver coin, 25 tons; minor coin, 5 cent nickel, 100 tons.

Gold, Alluvial, 5, 438.

and specic payment, 12, 275.

certificates, 7, 459.

Fool's, 5, 221.

ore, 5, 438.

Placer-mining, 5, 223.

production in 500 years, 13, 162.

Properties of, 5, 223.

Purity of, 5, 223.

quartz, 5, 438.

Source of, 5, 223.

standard law, 7, 458.

Gold Coast.—One of the four British Crown colonies in West Africa, the others being Gambia, Lagos, and Sierra Leone. It stretches for 350 miles along the Gulf of Guinea, and has an area, exclusive of Adansi and Ashantiland, in the interior, of about 40,000 square miles, with a population estimated at 1,475,000, of whom only about 500 are Europeans. The chief towns are Accra (the administrative center—pop., 17,000), Cape Coast Castle (pop., 12,000), Elmina (pop., 10,500), and Winneba. The Ashanti country, with Kumassi as its capital, was in 1896 placed under British protection. The products of the colony are gold, India rubber, palm kernels and oil, timber, etc. A railway is now under construction from Sekondi to Kumassi (or Coomassie).

Golden Age, The.—A term used by early classical writers to describe an era in the infancy of the human race of simplicity, prosperity, and happiness—an era when war and bloodshed were unknown and men lived like gods in happy security, innocence, and plenty. The Greek poet Hesiod, as well as the Latin poets, Virgil, Tibullus, and Ovid, was fond of depicting this happy period and dedicated not a little of his finest verse to its laudation. Many nations, both ancient and modern, have traditions of a "Golden Age" in their histories and literatures. The Assyrian and the Chaldean-Babylonian empires, as well as China, Egypt, Media, and Persia had such periods in their annals. Some of the modern nations also speak of such eras, as England in the reign of Queen Elizabeth, or in the literature of the era of Queen Anne, which is termed "golden" through the luster shed upon it by writers such

as Dryden, Pope, Addison, Steele, Johnson, and Gay. The term is also applied in France to parts of the reigns of Louis XIV. and XV.; in Germany to the reign of Charles V. (1515-58), the Austro-Spanish monarch of many thrones; in Spain to the reign of Ferdinand and Isabella, when the crowns of Castile and Aragon were united (1474-1516); in Sweden to the eras of Gustavus Vasa and Gustavus Adolphus; in Russia to the reign of Czar Peter the Great; and in Prussia to the era of Frederick the Great. The term is also applied by modern poets to a coming millennial time, the dream of all seers, when 'the years have died away.'

Golden age of the Hindus, 10, 12.

apples, 10, 107.

Golden City.—A name sometimes applied to San Francisco.

Golden-crowned thrush, 4, 186.

Golden Fleece.—According to the beautiful Greek legend of Jason and the Argonauts, was the fleece of the winged ram "Chrysomallus," to recover which was the object of Jason's expedition to Colchis, a generation before the Trojan War. Accounts of the sailing of the expedition, with incidents happening to Jason and his Greek heroes, is given in Homer's "Odyssey," in Pindar, and in Apollodorus. At Colchis, the king, Æetes, promised Jason the golden fleece, which was guarded by a sleepless dragon, on condition that he should yoke to a plow two fire-breathing, brazen-hoofed oxen, and sow the dragon's teeth which Cadmus had left at Thebes. By her magic power, the king's daughter, Medea, enabled Jason to accomplish this and other perilous exploits. The ram was sacrificed to Zeus and the fleece was hung by Jason on the branches of a sacred oak. The fleece was afterward seized by Jason and taken away by him to Corinth, and with him went Medea, the sorceress, who was in love with him, but who, after many adventures and plottings, was abandoned by Jason for Glauce, daughter of King Creon, and at length returned to Colchis. The "Golden Fleece" is also applied to a decorative order of Knighthood, founded in 1430 by Philip the Good, Duke of Burgundy, and is still conferred by Austria and Spain upon distinguished personages. The emblem was chosen probably from the fact that fleece (wool) was the chief manufacture of the Netherlands, when the duke of Burgundy, as regent of France, acquired Holland as a territory of France.

Golden Fleece, 10, 108.

Golden Gate.—The name of the strait connecting San Francisco with the Pacific Ocean.

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- "Golden Legend."**—(1) A collection of lives of the Saints, printed by Caxton, 1483. (2) The title of a dramatic poem by Longfellow.
- Golden Pheasant.**—A bird of China, remarkable for its beautiful plumage.
- Golden pheasant, 4, 127.**
 robin, 4, 163.
 rod, 5, 37.
 swamp warbler, 4, 186.
 winged warbler, 4, 186.
 woodpecker, 4, 178.
- Goldfinch, American, 4, 182.**
 Eggs of the, 4, 116.
 European, 4, 184.
 Food of the, 4, 183.
 Nest of the, 4, 115, 183.
- Goldfish, 4, 301.**
 Characteristics of the, 4, 301.
 Japanese, 4, 302.
- Goldilocks, Story of, French fairy tale, 3, 81.**
- Goldmark, Karl.**—Born, 1832. A noted Austro-Hungarian composer.
- Goldsborough, Louis Malesherbes, 12, 5.**
- Goldschmidt, Mme.**—The "Swedish Nightingale," or as she was familiarly known in her maiden days, "Jenny Lind." This famous singer was born at Stockholm, Sweden, in 1821, and died in Malvern, England, in 1887. She possessed, in her prime, a thrilling, sympathetic voice, though one more of sweetness than of volume. Her early successes were at Stockholm, where she appeared as "Agatha" in "Der Freischütz" and as "Alice" in "Robert le Diable." After a period of study in Paris, she returned to Sweden, and afterward appeared in Germany. Great Britain, and under the auspices of the late P. T. Barnum in the United States, where she was received with enthusiasm. In 1852, while in this country, the prima donna married Otto Goldschmidt, a German musical conductor and composer, then in Boston, who died in 1890. After 1856 she sang little in public, save occasionally for charity, and at the Royal College of Music, in London, where she was professor of singing from 1883 to 1886.
- Goldsmith, Oliver.**—(1728-1774.) A famous English writer, known everywhere as the author of the tale, "The Vicar of Wakefield." Among his most popular poetical works are: "The Traveller" and "The Deserted Village." His best known comedy is "She Stoops to Conquer."
- Goldsmith, Oliver, 14, 11, 374.**
- Golf, 6, 255.**
 Educational value of, 6, 18.
- Golf-croquet, 6, 274.**
- Goliath.**—A giant of Gath, champion of the Philistines, slain by David.
- Gompertz, Benjamin.**—(1779-1865.) An English astronomer and actuary.
- Goncourt, Edward de (1822-1896), and Jules de (1830-1870).**—French authors; brothers who worked in collaboration.
- Gonsalvo, de Cordova, 10, 288.**
- Gonzalez, Manuel.**—(1833-1893.) A distinguished Mexican general and statesman.
- Good Friday, 13, 98.**
- Good Hope, Cape of.**—A promontory at the southwestern extremity of Cape Colony, South Africa.
- "Good-natured Man, The."**—A comedy by Goldsmith, produced, 1768.
- Goodrich, Samuel Griswold** (*pseudonym* PETER PARLEY.)—(1793-1860.) The author of many juvenile books.
- Goods, Contraband, 13, 109.**
- Good Templars.**—A secret order having for its purpose the promotion of temperance and right living, intended especially to exert a moral influence upon young people. At the middle of the 19th century it had a large membership in the U. S. Its usefulness was impaired by its feature of secrecy, and as the temperance cause developed other forms of work, the Good Templars were in a considerable degree displaced. Of late years the membership has fallen off.
- Good Will.**—The interest of an established business in the way of trade or custom.
- Goodwin Sands.**—Dangerous shoals lying east of Kent, England.
- Goodyear, Charles, 8, 209; 11, 380.**
- Goose, 4, 109.**
 Emblen, 4, 109.
- Gooseberry, 5, 59.**
- Goose-fish, 4, 288.**
 Characteristics of the, 4, 288.
 Reproduction of the, 4, 288.
- Goose-girl, German fairy tale, 3, 87.**
- Goose, Solon, 4, 234.**
- Gopher as a pet, 4, 57.**
 Food of the, 4, 57.
 Nest of the, 4, 57.
 Striped, 4, 57.
- Gordius.**—An ancient Lydian king, father of Midas. It was declared by an oracle that he who should untie the knot in the harness of the oxen of Gordius would rule over Asia. The knot was cut by Alexander the Great.
- Gordius, The, 4, 377.**
- Gordon, Charles George,** familiarly known in his day as "Chinese Gordon," or "Gordon Pasha," was a British military hero, a strange compound, as he has been termed, of Oliver

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- Cromwell and Thomas à Kempis. He came of a race of soldiers and himself entered the British army in 1852 as an officer in the Royal engineers. He first saw fighting at Sebastopol during the Crimean War, and he there gained from the French, then allies of England, the decoration of the Legion of Honor. He then served in China during the Taiping rebellion, where in command of a European-clad Chinese army he fought 33 actions in two campaigns, took numerous walled towns, and crushed the formidable rebellion. We next find him in Egypt, as governor of the equatorial provinces, suppressing the slave trade and establishing a series of fortified posts inland to the great lakes. Now become a major-general in the British army, he was sent once more to Egypt, where in 1884 the Moslem population had risen in revolt, and defeated and isolated Egyptian garrisons. Gordon was intrusted with the perilous duty of leading his trusty Sudanese soldiery against the Mahdi and his fanatic followers and of withdrawing to safety the endangered and exposed Egyptian garrisons. Cairo was reached Jan. 27, 1884, and on the 18th of Feb., the simple lion-hearted soldier hero reached Khartum. Here he was besieged by the Mahdi's forces, and before relief could reach him he was killed in the storming of the city, Jan. 26, 1885. It was not until 1898 that the British reëntered Khartum, the dervishes of the Sudan having been defeated at Omdurman by Lord Kitchener, who restored the country to peace and order.
- Gordon, Charles**, Death of, 11, 18.
- Gordon, Rev. George A.**, Influence of Manual Training on the life of, 7, 6.
- Gordon, Lord George**.—(1751-1793.) An English reformer or agitator. His action in opposing, as president of the Protestant association, the Bill of Toleration in favor of the Roman Catholics, caused riots in London, June 8, 1780.
- Gordon Riots**.—The anti-Roman Catholic riots, instigated by Lord George Gordon, in London, June, 1780. See preceding article.
- Gordon setter dog**, 4, 20.
- Gordon, Sir Arthur Hamilton**.—Born, 1829. A British colonial governor; he was appointed governor of New Brunswick in 1866; Trinidad, in 1870; Fiji Islands, 1874; New Zealand, 1880; Ceylon, 1883.
- Gore House**.—In London, a house formerly occupying the site now occupied by the Albert Memorial. Early in the 19th century it was a famous resort for men of letters.
- Gorges, Sir Ferdinand**, 11, 45.
- Gorgias**.—A celebrated Greek rhetorician, a contemporary of Socrates.
- Gorgons**.—Legendary beings or monsters in Greek mythology, having wings, brazen claws, and enormous teeth.
- Gorilla**, 4, 63.
Habits of the, 4, 64.
- Gorman, Arthur Pue**, 12, 275.
- Gortchakoff, Prince Alexander Mikhailovitch**.—(1798-1883.) A distinguished Russian statesman.
- Goschen, George Joachim**.—Born, 1831. An English politician and financier.
- Gosnold, Bartholomew**, 11, 58.
- Gossaert, or Gessert, Jan**.—Died, 1541; a noted Flemish painter.
- Gosse, Edmund Wm**.—An English poet and littérateur, son of Philip Henry Gosse, the naturalist, was born in London in 1849. In early life he was assistant-librarian in the British Museum and translator to the English Board of Trade. He has traveled extensively, especially in the northern countries of Europe, where he made a study of Scandinavian literature, and has published many translations of the novels of such writers as Björnson, Jonas Lie, and other Norwegian authors. He has also published a mediæval romance of his own, entitled "The Sécet of Narcisse," together with many monographs on English writers, poets, and littérateurs. Among his published works are: "Seventeenth Century Studies," "From Shakespeare to Pope," "History of Eighteenth Century Literature," "Gossip in a Library," "The Jacobean Poets," with lives of Gray, Congreve, and Sir Walter Raleigh.
- Gotha**.—In Prussia, a city of the duchy of Saxe-Coburg-Gotha, and the seat of residence, alternating with Coburg, of its dukes. Pop., 32,000.
- Gotham**.—(1) A parish of Nottinghamshire, England, the people of which have long had a reputation for their simplicity. "The Wise Men of Gotham" is a term that has been applied to them. (2.) A name applied to New York City.
- Gothenburg, or Gottenburg**.—A seaport of Sweden; the second city of the country. Pop. (1899), 126,849.
- Gothic**.—A term applied to the language, arts, etc., of the Goths, a Teutonic race that first appeared along the lower courses of the Danube in the 3d century. They were divided, later, into the Visigoths (West Goths) and the Ostrogoths (East Goths) and they exerted a powerful influence in Europe during the Middle Ages.

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Goths, 10, 233.

Götterdämmerung (TWILIGHT OF THE GODS).
—The fourth part of Wagner's "Ring des Nibelungen."

Gtötfried von Strasburg.—Born near the close of the 12th century; a Middle High German poet.

Göttingen.—A town of Hanover, Prussia. The seat of a noted university and library.

Gottschalk, Louis Moreau.—(1829-1869.) A noted pianist; of French and English parentage.

Gottsched, Johann Christoph.—(1700-1766.) A noted German author and critic.

Gough, J. B.—A noted Anglo-American orator, lecturer, and temperance advocate. In the latter cause, he labored for many years in this country and in England with great zeal and enthusiasm, and perhaps was more successful from the fact that in early life he had himself been of dissipated habits, but had recovered and reformed. His writings embrace, besides an "Autobiography" and a series of temperance lectures, a work which he called "Gleanings from My Life-Work." Gough was born in Kent, England, in 1817, and died at Philadelphia in 1886.

Goujon, Jean.—Died about 1568. A celebrated French sculptor.

Gould, Jay, 12, 275.

Gould, Thomas R., 9, 412.

Gounoud, Charles François, 9, 105.

Gourd, 5, 60.

Calabash, 5, 60.

Dish-cloth, 5, 60.

Towel, 5, 60.

Governess, an occupation for women, 7, 365.

Government debts, 13, 340.

employment advantages and disadvantages of, 13, 359.

Jefferson theory of, 11, 175.

Local, 11, 246.

Governor, 12, 275.

Governor's Island.—A small fortified island in New York Harbor; belongs to the U. S. and is the headquarters of the Department of the Atlantic.

Gower, John.—Died, 1408. An English poet, best known to-day by his "Confessio Amantis."

Gracchi, The.—Two brothers of a noble Roman family of the name of Gracchus, who sought, in the interest of the people, to introduce reforms in the Roman state. The elder, named Tiberius Sempronius Gracchus, who had served in the wars in Spain, was in 134 B. C. elected tribune of the plebs (the common people), and attempted to pass an Agrarian law, by which the public lands would be

divided to make small farms for the poor. This brought upon him the hostility of the nobles, who incited a riot in which Tiberius Gracchus and 300 of his followers were killed. The other brother, Caius Sempronius Gracchus, tried to carry out and extend his late brother's designs, and succeeded so far as to get the knights and the people on his side. He passed an Agrarian law and founded many colonies for the poor; but when he went further and sought to make all the Latins citizens of Rome, the Romans were so stirred by this that, though they gave way, the nobles once more incited a riot and killed Caius Gracchus and many of his plebs. It is of these two men that the story is told of a wealthy Roman lady who was showing their mother (Cornelia) all sorts of jewels and asked to be shown Cornelia's. Calling her two sons, of whom she was very proud, she put her arms about them and said, "These are my jewels!"

Gracchi, 10, 218, 394.

Grace, William Gilbert.—An English physician, born, 1848. He has the reputation of being the best all-round cricket player ever known. He is especially strong as a batsman.

Grace, William R., 13, 75.

Graces, The (Lat., *Gratiæ*, Greek, *Charites*), were in classical myth the goddesses of grace, beauty, refinement, and loveliness. Homer in the "Odyssey" speaks of the Graces as attendants on Aphrodite, the goddess of love and beauty, while Hesiod mentions three—Thalia, Aglaia, and Euphrosyne. The Spartans and Athenians, worshiped only two Graces, though under different names. The Graces are generally represented as daughters of Zeus by Hera, and are usually portrayed as slightly draped or nude nymphs, bearing in their arms roses and myrtles, as well as musical instruments and dice.

Grackle, 4, 175.

Purple, 4, 176.

Grady, Henry W.—Born, 1851; died at Atlanta, Ga., 1889. He was noted as an orator, and was editor of the Atlanta "Constitution."

Grady, Thomas, 14, 101.

Graham, Charles K., 12, 5.

Graham, Sylvester, 11, 380.

Graham, William, 14, 95.

Graham, William Alexander, 11, 380.

Graham, William M.—Born in Va., 1798; killed at the battle of Molino del Rey, in Mexico, Sept. 8, 1847. An officer of the U. S. army who served with distinction in the Seminole and Mexican wars.

Graham flour, 5, 89.

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Grail.—A cup or chalice of emerald supposed to have been used by Christ at the Last Supper. See ARTHURIAN LEGEND.

Grail, The Holy, 3, 442.

Grain-Elevators are buildings constructed for elevating, storing, and loading grain into railroad cars and vessels. In their magnitude, they are best seen in the chief shipping ports of the country, and in the west in the great grain centers where the grain is collected for storage and shipment. Their capacity varies greatly, the largest elevators being found in Chicago, one of which is capable of storing 50 million bushels, in Duluth, Minneapolis, and New York, each having a capacity of from 25 to 30 million bushels, and in Buffalo and St. Louis, with a capacity of from 12 to 15 million bushels. The vast trade in grain to-day in a center like Chicago, may be realized from the fact that that city now handles yearly about 250 million bushels of wheat, corn, oats, and rye.

Gram, 13, 152, 162.

Gramophone.—A device for recording and reproducing sound, a sort of mechanical phonograph. It was invented by Émile Berliner, but so far the invention has been little more than a source of entertainment and amusement. The reproducing mechanism consists of a stylus that falls into grooved lines on a rubber plate, and is governed by a sensitive spring that enables it to receive the vibrations recorded thereon and transmit them in turn to a diaphragm placed in a sounding box with a trumpet-shaped opening that augments the sound. The revolution of the plate under the stylus, which may be effected by a hand or pedal crank, causes the sounds first recorded on the zinc disk to be reproduced audibly.

Grampians.—An extensive mountain system in Scotland, dividing the Highlands from the Lowlands. Ben Nevis (4,406 ft.) is the highest peak.

Granada.—(1) A former kingdom of Spain, held by the Moors until taken by Ferdinand in 1492.

Granada.—A city and province of Andalusia, in southern Spain, lying to the northeast of the port of Malaga on the Mediterranean. The lower levels of the province are very fertile—the richest in the whole peninsula; the higher portions form part of the chain of the Sierra Nevada Mountains, which feed the Genil River, near which the city of Granada is built, and which flows northward into the Guadalquivir. The ancient sections of the capital of the province retain much of its early Moorish architecture, with many monasteries, convents,

and churches in which are a number of notable paintings by Murillo and other great artists. In its best days, from the 13th to the 15th centuries, Granada rose to great splendor as the exclusive seat of Islam in Spain, especially in the era when the great palace and citadel of the Alhambra was built. Pop., to-day, 75,000.

Granby Token.—An unauthorized coin issued by John Higley, of Granby, Conn., in 1737. It was made of copper and on the obverse bore a deer, with the words "Value me as you please," the Roman numerals III., and a crescent. The design on the reverse consisted of three hammers on a triangular field, each bearing a crown. The legend was, "I am good copper."

Granby Token, 13, 162.

Grand Canal.—The principal canal in Venice running in an irregular course through the city.

Grand Cañon of the Colorado.—The cañons of the Rio Colorado have been noted for their commanding beauty, especially since 1869, when the river was explored by the Powell Survey expedition. The Grand Cañon occurs in the middle course of the river, and extends for a distance of nearly 200 miles westward from the junction of the Colorado Chiquito. Its walls rise almost sheer from the water's edge to a height of from 4,000 to 6,500 feet. The main stream (known as the Green River) has its source in Fremont's Peak, in western Wyoming, and flowing through Utah and Arizona empties into the Gulf of California—a total distance of about 2,000 miles. It is navigable for 600 miles to Callville.

Grande Ecaille, 4, 291.

Grandee, Russian fable, 3, 208.

Grandfather's Chair.—A collection of children's stories, written by Hawthorne in 1841, which was followed by a second series in 1842.

Grand Forks.—A city in N. D. It has an extensive lumber trade and is the seat of the University of North Dakota. Pop. (1900), 7,652.

Grand jury, 12, 276.

Grand Prix (*gron' prē*), Le.—The great horse race at Longchamps in the Bois de Boulogne, Paris, established by Napoleon III. It takes place on Sunday of Ascot week and the prize is 20,000 francs.

Grand Prix de Rome.—The prize given annually by the Academy of Fine Arts in Paris to the competitor who passes the most successful examination in sculpture, painting, engraving, music, or architecture. The winner goes to Rome for four years at the expense of the government.

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Grand Rapids.—A city in Mich., situated at the rapids of the Grand River. It is the center of an important manufacturing and commercial district. Pop. (1900), 87,565.

Granet, François Marius, 9, 265.

Granger, Francis, 11, 380.

Granger, Gideon, 11, 380.

Granger, Gordon, 12, 5.

Grangers.—A common name for the Patrons of Husbandry, a secret association for the protection of agricultural interests. The society had its origin in the depressed condition of agriculture immediately succeeding the Civil War. Its object was to redress the grievances of the farmers against the middlemen and railroad companies. The plan of organization embraces a secret ritual. It was organized in Washington, Dec. 4, 1867, by employees of the Department of Agriculture. In a manifesto issued in 1874, the objects of the Grangers were declared to be "to develop a better and higher manhood and womanhood, to enhance the comforts of our home; to buy less and produce more, to discountenance the credit system that tends to prodigality and bankruptcy." In 1884 its membership was 4,000,000. The organization has since lost many of its members and in some sections has ceased to exist.

Grani'cus.—A small river in Asia Minor where Alexander the Great won his first victory over the Persians in 334 B. C.

Granicus, Battle of the, 10, 204.

Granite, 5, 446.

Granite State, The.—A name applied to N. H. on account of its abundant granite.

Gran Reunion Americana, 11, 58.

Granson, Siege of, 10, 276.

Grant, John, 14, 55.

Grant, Ulysses Simpson, 12, 6.

referred to, 14, 13, 102, 103, 196, 264, 274, 311, 349.

First term of, 12, 158.

nominated for president, 12, 157.

Second term of, 12, 159.

Tour of the world, 12, 160.

Grape, 4, 482.

Catawba, 4, 482.

Concord, 4, 482.

Delaware, 4, 482.

Grape fruit, 5, 8.

Grape-mildew, 5, 97.

Grape-sugar, 5, 233.

Graphite, Amorphous, 5, 176.

Crystalline, 5, 176.

Graphite—*Continued.*

Properties of, 5, 176.

where found, 5, 176.

Yield of, 5, 176.

Grasping objects, Education of a child by, 2, 78.

Grasses, 5, 81.

Blue grama, 5, 82.

Blue grass of Kentucky, 5, 81.

Bluestem, 5, 81.

Buffalo bunch-grass, 5, 82.

Bunch wheat grass, 5, 82.

Canadian lyme, 5, 81.

Feather, 5, 82.

Fescue, 5, 82.

Foxtail grass, 5, 585.

Giant lyme, 5, 81.

Lawn grass, 5, 82.

Lyme, 5, 81.

Meadow wheat grass, 5, 82.

Nevada blue grass, 5, 81.

Number of species of, 5, 81.

Pampas grass, 5, 88.

Quaking grass, 5, 88.

Sand blue grass, 5, 81.

Side oats, 5, 82.

Timothy grass, 5, 89.

Wheat grass, 5, 81.

Woodland lyme, 5, 81.

Yellow lyme, 5, 81.

Grass finch, 4, 184.

Grasshoppers, 4, 364.

Grass pike, 4, 305.

Grattan, Henry.—(1746–1820.) An Irish statesman and orator famous in law, as well as in the Irish and the Imperial Parliaments.

Grattan, Henry, referred to, 14, 177.

Gratz.—The capital of Styria, Austria-Hungary, situated on the Mur. Pop., 113,540.

Grave Creek Mound.—A prehistoric relic of the Moundbuilders, near Elizabethtown, W. Va. It is 70 feet high and 1,000 feet in circumference.

Gravitation, 5, 110.

Force of, 5, 256.

Gravity, Specific.—The specific gravity of any substance is the weight of the body compared with the weight of an equal volume of water taken as a standard. To find this the body is weighed in air; it is then weighed in water. The loss of weight in water represents the weight of an equal volume of water. The loss of weight in water is then divided into the weight in air; the quotient is the specific gravity of the body.

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The following table gives the specific gravity of both liquids and solids:—

Water	100	Cork	24	Indigo	77	Granite	278
Sea-water	103	Poplar	38	Ice	92	Diamond	353
Dead Sea	124	Fir	55	Gunpowder	93	Cast iron	721
Alcohol	84	Cedar	61	Butter	94	Tin	729
Turpentine	99	Pear	66	Clay	120	Bar iron	779
Wine	100	Walnut	67	Coal	130	Steel	783
Urine	101	Cherry	72	Opium	134	Brass	840
Cider	102	Maple	75	Honey	145	Copper	895
Beer	102	Ash	84	Ivory	183	Silver	1,047
Woman's milk	102	Beech	85	Sulphur	203	Lead	1,135
Cow's "	103	Maliogany	106	Marble	270	Mercury	1,357
Goat's "	104	Oak	117	Chalk	279	Gold	1,926
Porter	104	Ebony	133	Glass	289	Platina	2,150

The weight of a cubic foot of distilled water at a temperature of 60° F. is 1,000 ounces Avoirdupois, *very nearly*, therefore the weight (in ounces, Avoirdupois) of a cubic foot of any of the substances in the above table is found by multiplying the specific gravities by 10, thus:—one cubic foot of oak weighs 1,170 ounces; one cubic foot of marble 2,700 ounces, and so on.

Gravity, Specific, 5, 254.

Gray, Asa.—A distinguished American botanist, born in 1810, and died in 1888. In 1842, he became Fisher Professor of Natural History at Harvard University, a post which he held continuously until 1874, when he succeeded Agassiz as regent of the Smithsonian Institution at Washington. The last 15 years of his life he passed in study and scientific investigation at Cambridge. He was an active Darwinian and correspondent and friend of the author of "The Origin of Species," though holding stoutly to his theistic beliefs. He wrote many valuable manuals on botany and on the "Genera of the Plants of the United States." Among his other works are: "How Plants Grow," "Lessons on Botany," and "Structural and Systematic Botany," and on "The Synoptical Flora of North America."

Gray, Elisha.—Born at Barnesville, Ohio, 1835. An inventor noted for his improvements in telegraphy and telephony. A long litigation between him and Alexander Graham Bell, relative to priority of right in the invention of the telephone, was decided by the U. S. Supreme Court in favor of Bell.

Gray, Henry Peters.—Born at New York, 1819; died there, 1877. An eminent painter. He was president of the National Academy (1869-71). His most noted productions are "Greek Lovers" and "The Apple of Discord."

Gray, Thomas.—(1716-1771.) An English poet, best known as the writer of the "Elegy Written in a Country Churchyard" (1751).

Gray's Peak.—Situated in Col. It is one of the highest summits of the Rocky Mountains.

Gray-headed warbler, 4, 186.

Great Basin.—An elevated plateau between the Sierra Nevada and Wahsatch Mountains. The drainage of the greater part of it is into Great

Salt Lake and other interior lakes, which have no connection with the sea.

Great Bear (Ursa Major), 5, 135.

Great Bear Lake.—A lake in northwest Canada. It is 150 miles long and is drained into the Mackenzie River.

Great blue heron, 4, 223.

Great Britain,

Or to give it its official name since Jan. 1, 1801, the "United Kingdom of Great Britain and Ireland," comprises England, Scotland, Ireland, Wales, and the small neighboring islands. The empire of which the British Isles is the nucleus and center includes imperial India, the great colonies such as Canada, Australasia, Cape Colony, and many other possessions in Africa, numberless islands in many seas, such as Bermuda, the Bahamas, Ceylon, Cyprus, Jamaica, Malta, Newfoundland, New Zealand, St. Helena, Zanzibar, etc., together with other cessions, protectorates, and settlements in almost every country and clime. The area of the United Kingdom and Ireland is, roughly speaking, 121,000 square miles, or only a little more than one-thirtieth of the area of continental Europe. The extreme length of the main island (England, Wales, and Scotland) is 610 miles, that is, from Dunnet Head to Lizard Point. The total length of Ireland is 306 miles. The entire coast-line has a length of 4,300 miles. Great Britain holds the first rank among the commercial nations of the world for both home and foreign trade, though she has now a formidable rival in the United States. She is the world's carrier, the estimated tonnage of vessels of different nations entering and clearing from British ports in 1899 being over 65 million tons. The trade of the United Kingdom, which in 1801 (imports and exports) was 67 millions sterling, rose in 1901 to 877 million pounds sterling. Her population, during the

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Great Britain—Continued.

same period, rose from under 16 millions to 41½ millions, despite the constant outflow of emigrants. That of her colonies and dependencies (which have 90 times the area of the United Kingdom) is to-day reckoned at 354 millions. The national revenue of the kingdom has risen from 37½ million pounds stg. in 1801 to 115 millions in 1901. The aggregate wealth of the kingdom has advanced within the 19th century from 11 to over 60 billion dollars, and since 1870 has increased at the rate of 2¼ million dollars a day.

The government of the nation is a constitutional monarchy, in which the sovereign (to-day, King Edward VII.) alone represents the supreme executive, and the king jointly with Parliament is the supreme legislative power. Parliament comprises the sovereign, the House of Lords, and the House of Commons; an act, to have the force of law, must have passed all three. The national revenue, which is derived from excise and customs duties, from income and property tax, from estate duties, stamps on deeds, and from the post-office and telegraphic service, was, for the financial year 1900-01, close upon 115 million pounds sterling, though the expenditure for the same period was over 53 million pounds in excess, owing mainly to the cost of maintaining the Boer War. The assets of the nation, it is, on the other hand, estimated, are sufficient to pay all its liabilities ten or eleven times over.

THE ORIGIN OF THE ENGLISH PEOPLE.—The original inhabitants of Britain were mainly of Keltic origin; their language being still spoken by many of the Welsh, Irish, and Highland Scotch of the present day. They were a warlike people, and their bravery was well shown in the defense of their country against the Roman invaders, the Picts and Scots being specially successful in their harassing attacks upon the Romans, driving them finally from the island in A. D. 410. After they left the country, the Britons, being then unfitted for self-government, fell back into their savage ways, and their country became a prey to the pirate Saxons of the Northern Sea. The Saxon tribes that first secured a foothold in the country were under the leadership of Hengist and Horsa. They came from Jutland, the peninsula of Denmark, and with their wives and families settled in Kent about the year 451. Later on these Jutes, as they were called, were followed by the two other branches of the same family, the Saxons and the Angles—the common home of all

being the low-lying lands around the Baltic and the North Sea. The Saxons founded settlements in Sussex and Wessex; while the Angles took the land on the east coast, from the Thames to the Firth of Forth. All these tribes—Jutes, Saxons, and Angles—were afterward known as the English. As time passed, these settlements grew into kingdoms, each striving for sovereignty. These were named Kent, Sussex, Wessex, Essex, Northumbria, East Anglia, and Mercia. At the close of the 8th century three of the kingdoms had absorbed the others; and by the year 827 A. D., after much war and bloodshed, the supremacy passed to the kingdom of Wessex, and what is called the Saxon Heptarchy came to an end. This happened in the reign of Egbert, in whose day the country became known as England, the land of the Angles, the most numerous of the Saxon tribes. To this period belongs the legendary King Arthur, of whom the late poet-laureate, Tennyson, has written in the "Idylls of the King."

The following is an epitome, in brief, of England's subsequent history:—

Introduction of Christianity among the English.....	A. D. 597
The Norse sea-kings, under their Vikings or chiefs, ravage England....8th and 9th Cent.
King Alfred the Great routs the Danes or Norsemen..... (ruled)	871-901
A Dane now comes to the English throne—King Canute..... (ruled)	1017-1035
Danish and Norman rivalry for the English Crown.....	1066
William the Conqueror wins the battle of Hastings (Senlac) and the Crown..... (Christmas Day)	1066
Succession of William Rufus and his brother Henry I..... (ruled)	1087-1135
Reign of Stephen of Blois and Feudal oppression..... (ruled)	1135-1154
The first of the Angevin or Plantagenet kings—Succession of Henry II.	1154-1189
Conquest of Ireland.....	1171
Era of the Crusades—Richard I. (Cœur de Lion).....	1189-1199
Era of King John and the Great Charter.....	1199-1216
The Baron's War and the First Parliament (Henry III.).....	1264
Conquest of Wales and Scotland, Reign of Edward I.....	1272-1307
Edward II. and the Ordainers—Fight for Scottish Independence....	1307-1327
Edward III. and the beginning of the 100 Years' War with France....	1327-1377
Richard and the Peasants' War—Age of Wyckliffe and Chaucer....	1377-1399
Henry IV. (Bolingbroke), first of the Lancastrian kings.....	1399-1413

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- Henry V. and the Conquest of France.
Persecution of Lollards 1413-1422
- Henry VI. and the Loss of France:
England distracted by Wars of the
Roses..... 1422-1461
- The fight for the Crown. Edward IV.
(of York)..... 1461-1483
- The New Monarchy. Edward V., Brief
rule of.....(Apr. to June) 1483
- Richard III. and the Battle of Bos-
worth (1485) 1483-1485
- The first of the Tudors. Era of Henry
VII..... 1485-1509
- Henry VIII. and the Great anti-Papal
Revolt..... 1509-1547
- The Reformation under Edward VI.
Prayer-Book of King Edward 1547-1553
- The Catholic revival under Mary Tu-
dor..... 1553-1558
- The Renowned Age of Elizabeth—the
Fight for Religion. The Armada... 1558-1603
- James I. and Stuart Rule, and the
struggle between Crown and Parlia-
ment 1603-1625
- Charles I. and a defiant House of Com-
mons 1625-1649
- Cromwell and the "Great Rebellion."
The Commonwealth..... 1649-1660
- England and a Royalist Reaction.
Rule of Charles II.... 1660-1685
- Freedom's Battle won. The cruel and
arbitrary James II..... 1685-1688
- The Revolution. Change in the Char-
acter of the Monarchy. William III. 1689-1702
- Queen Anne and the contest for "Bal-
ance of Power"..... 1702-1714
- England in the 18th century comes un-
der the Georges and Whig Rule.... 1714-1727
- George II. and the ministries of Wal-
pole and Pitt..... 1727-1760
- The Crown and the Colonies: George
III. and the effects of Regal Power.. 1760-1820
- Revolt and Loss of the American Col-
onies..... 1775-1783
- The Struggle against Napoleon. The
French Revolution (1789-1795)..... 1799-1815
- Trafalgar, Austerlitz, and Jena (1805-
06). The Peninsular War..... 1808-1814
- George IV. and the Era of Parliamen-
tary Reform..... 1820-1830
- William IV., the First Reform Bill and
Abolition of Slavery 1830-1837
- Victoria and the Age of Progress and
Colonial Expansion..... 1837-1901
- Growth of Democracy, Extensions of
the Franchise, The Crimean War,
The Indian Mutiny, Disestablish-
ment of the Irish Church.

**Great Britain and France, Non-intercourse act
against, 11, 208.**

- as the trustee of civilization in Egypt,
11, 18.
- Colonial expansion of, 11, 14.
- extends her boundaries in India, 11, 26.

Great Britain's colonial dependencies, 11, 34.

Great circles, 5, 109.

Great Commoner.—A name given to William
Pitt (afterward Earl of Chatham), on account
of being a member of the House of Commons
and not of the House of Lords.

Great dipper, 5, 107.

Great Dismal Swamp, 5, 430.

"Great Eastern," The, 5, 399.

Great Falls.—A city in Mont., on the Missouri
River, the center of a large manufacturing and
trading district. Pop. (1900), 14,930.

Great Flowered Magnolia, The, 4, 410.

Great Head.—A noted promontory in the east-
ern part of Mount Desert, Me.

Great horned owl, 4, 144.

Great Lakes.—Five large bodies of fresh water
on the northern line of the U. S. They are
Superior, Michigan, Huron, Erie and Ontario.
Lake Superior is the largest sheet of fresh
water in the world; elevation above sea-level,
600 feet; length, 370 miles; area, 32,000 sq. miles.
Lake Michigan is 340 miles long and has a
mean depth of 870 feet; elevation above sea-
level, 582 feet and area, 22,000 sq. miles. Lake
Huron has a length of 270 miles; depth from 300
to 1,800 feet; elevation above sea-level, 581
feet; area about 23,800 sq. miles. Lake
Erie is the southernmost and shallowest of the
lakes and is about 250 miles long; elevation
above sea-level, 573 feet; area, 9 600 sq. miles.
Lake Ontario is the smallest and easternmost
of the lakes, and is 190 miles long; elevation
above sea-level, 234 feet; area, 7,500 sq. miles.

Great laurel, 5, 13.

Great maple, 4, 409.

Great Northern Railway, 12, 348.

Greatorrex, Henry Wellington.—Born in Eng-
land, 1816; died at Charleston, S. C., 1858.
An eminent musician. He emigrated to the
U. S. in 1839 and became distinguished by
his efforts to advance the standard of church
music.

Greatorrex, Mrs. (ELIZA PRATT).—Born in Ire-
land, 1820; died, 1897. An Irish-American
artist; she came to New York in 1840 and
married Henry Wellington Greatorrex in 1849.
She became an associate of the National
Academy in 1868.

Great Salt Lake.—Situated in Utah and noted
for its saltiness. It is 4,200 feet above the sea-
level; length, 75 miles, greatest width, about
30 miles; area, about 2,360 sq. miles.

Greatsinger, Jacob L., 13, 74.

Great Things Dull Boys Can Do, 14, 10.

Great white crane, 4, 222.

Grecian weights, 13, 220.

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- Greece.**—A kingdom lying to the south of Turkey with the Ægean and Ionian seas to the east, south, and west. The government is a hereditary constitutional monarchy, with a chamber of deputies comprising 207 members. The prevailing religion is that of the Greek Church. Area, 25,041 sq. miles; pop., 2,434,000.
- Greece, Independence of, 10, 363.**
 History of, 10, 189.
 Persian wars with, 10, 194.
 Rebellion of, 10, 362.
- Greek and Roman Mythology, 10, 85.**
 element in the English language, 8, 364.
 fairy tales, 3, 51.
 kalends, 13, 91.
 pottery, 1, 216.
- Greeks, Home ties among the, 1, 5**
 Life of the, 9, 342.
 Religion of the, 9, 247.
 Worshipers of the human body, 9, 341.
- Greeley, Adolphus Washington, 12, 276.**
- Greeley, Horace, 12, 278.**
 Influence of manual training on the life of, 7, 5.
 nominated for the presidency, 12, 15.
- Greeley expedition, 12, 276.**
- Green, Anna Katherine.**—The maiden name and literary pseudonym of Mrs. Rohlf, an American novelist, born in 1846.
- Green, Ashbel.**—Born at Hanover, N. J., 1762; died at Philadelphia, 1848; president of Princeton College, 1812-22.
- Green, Ashbel, 11, 241.**
- Green, Floride,** on "Women in Business," 7, 439.
- Green, Horace.**—Born at Chittenden, Vt., 1802; died at Sing Sing, N. Y.; 1866. A noted physician, author of works on diseases of the throat and air-passages.
- Green, Jacob.**—Born at Philadelphia, 1790; died there, 1841. A noted American scientist, son of Ashbel Green and author of "Chemical Philosophy."
- Green, John Richard.**—An eminent English historian, was born at Oxford in 1837, and died at Mentone, France, in 1883. His chief published works include his popular "Short History of the English People," a larger work (in 4 vols.) entitled "History of the English People," a masterly work on "The Making of England," and on "The Conquest of England," and a collection of essays entitled "Stray Studies." He was the first historian of note to make a specialty of the social institutions of England and to trace the rise of the common people, in contradistinction to those writers who deal exclusively with the political aspects and development of the nation and of the work of its chief political leaders.
- Green, John Richard,** quoted on the Bible, 8, 367.
 referred to, 14, 6.
- Green, Norvin, 12, 287.**
- Green, Seth.**—Born at Irondequoit, N. Y., 1817; died at Rochester, N. Y., 1888. An eminent pisciculturist. He introduced improved methods of breeding fish and stocked several rivers in Conn. and Cal. with shad and other species. He was appointed a member of the New York Fish Commission in 1868 and superintendent in 1870. He was the author of "Trout Culture" and "Fish-Hatching and Fish-Catching."
- Green, William Henry.**—Born near Trenton, N. J., 1825; died at Princeton, N. J., 1900. He was professor of biblical and Oriental literature at Princeton in 1851, and chairman of the American Old Testament Revision committee, and of the English and American Bible Revision committees. He was author of "A Grammar of the Hebrew Language," "Moses and the Prophets," "The Jewish Feasts," etc.
- Greenaway, Kate.**—A well-known English artist and illustrator of children's books and child life. Receiving her artistic education at the Art School, Kensington, London, and at the Slade School of Art, she early studied Reynolds and Romney and designed from old plates and sketches in books of costumes until she evolved those delightful child types which have since become of world-wide repute. As a book illustrator she is known by her "Kate Greenaway's Alphabet," "Mavor's Spelling Book," "Little Ann," "Mother Goose," "Marigold Garden," "Under the Window," "The Language of Flowers," "The Pied Piper of Hamelin," "A Day in a Child's Life," "Birthday Book," and "A Painting Book for Boys and Girls." Many of her paintings were favorites of Mr. Ruskin, the well-known art-critic, and in his possession. She died in Nov., 1901.
- Greenback Party, 12, 287.**
- Greenbacks, 13, 163.**
- Green Bay.**—A lake port in Wis., on Fox River, noted for its lumber trade. Pop. (1900), 18,684.
- Greencastle.**—A city in Indiana, the seat of De Pauw University (Methodist Epis.). Pop. (1900), 3,661.
- Greene, Charles Gordon.**—Born at Boscawen, N. H., 1804; died at Boston, Mass., 1886. A noted American journalist. He was founder of the Boston "Morning Post" in 1831, which became the prominent organ of the Democratic party.

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Greene, Francis V., on "Business Chances," 13, 65.

Greene, George Washington.—Born at East Greenwich, R. I., 1811; died there, 1883. He was grandson of Nathanael Greene and author of "Historical View of the American Revolution" and "Life of Nathanael Greene."

Greene, John, on "Credit as Capital," 13, 110.

Greene, Nathanael, 11, 98.

Greene, Nathaniel.—Born at Boscawen, N. H., 1797; died at Boston, 1877: brother of Charles Gordon Greene. He was the founder of the "Statesman" in Boston, of which city he was postmaster from 1829 to 1840 and again from 1845-49. He was the translator of several French, German, and Italian works.

Green heron, 4, 225.

Greenhow, Mary T., 14, 171.

Greenland.—An immense peninsula or island in the North Polar sea, lying to the northeast of Labrador, supposed to have been first discovered by Norsemen about the year 900 A. D. It is bounded on the west by Davis Strait and Baffin Bay, and on the east by the Arctic and N. Atlantic Oceans. The area is roughly estimated at 512,000 square miles, with a population (mostly Eskimos) of about 11,000. The inhabited parts of Greenland, a region with an area of 46,740 sq. miles, together with Iceland, belong to Denmark, which may be said to have the monopoly of the trade. This trade is chiefly in seals, of which about 90,000 are taken every year: there is also considerable whale and halibut fishing on the coasts, which with bears, sea-birds, hares, and foxes, furnish the natives with food. Of animals, the Greenlanders have now only the dog, which is used *entrain* to draw sledges in passing over the traveled portions of the country, as reindeer are now scarce. The country is for the most part a wilderness of snow and ice, rising in places into mountains from 2,000 to 4,000 feet in height, great masses of which slide down into the fjords, where lifted up by the sea they form huge icebergs. Parts of the coast have frowning desolate cliffs of about 5,000 feet in height. What vegetation there is is stunted and of little value. For fuel the people have to depend upon drift-wood, turf, and train-oil. Greenland, in spite of its desolateness, has attracted many explorers, such as Kane, Hall, Nares, Peary, Greely, and Nansen.

Greenleaf, Benjamin.—Born at Haverhill, Mass., 1786; died at Bradford, Mass., 1864. He was the author of a series of mathematical works.

Greenleaf, Simon.—Born at Newburyport, Mass., 1783; died at Cambridge, Mass., 1853. A noted jurist. He became reporter of the Maine supreme court in 1820, and Dane professor of law at Harvard in 1846. He wrote a "Treatise on the Law of Evidence."

Green Mountain Boys.—A sobriquet applied to soldiers from Vt. in the Revolutionary War, who were organized and commanded by Ethan Allen in 1775.

Green Mountain Boys, 11, 99.

Green Mountains.—The highest peak of Mount Desert, Me., height 1,527 feet.

Green Mountains.—A part of the Appalachian system running through Vt., of which the highest elevation is Killington Peak, 4,240 feet in height.

Green Mountain State.—An epithet of Vt. which is traversed by the Green Mountains.

Greenough, Horatio.—Born at Boston, 1805; died at Somerville near Boston, 1852. A noted American sculptor. His chief productions are "A Statue of Washington" (near the Capitol, Washington), "The Rescue," "Venus Victrix," etc.

Greenough, Horatio, 9, 411.

Greenough, Richard S.—Born at Jamaica Plain, Boston, 1819 (brother of Horatio Greenough), noted as a sculptor.

Green Snake, The, 4, 247.

Greenville.—A city in S. C., the seat of several Baptist educational institutions. Pop. (1900), 11,860.

Greenwich.—A borough of Kent, England, on the Thames, close to London, noted as the seat of the Royal Observatory from which the meridians of longitude are reckoned for Great Britain. It is also noted as the former home for disabled or aged sailors, established in 1694. Of late years Greenwich Hospital has, however, been used as a royal naval college and a free school for 1,000 sons of sailors. The town has a pleasant appearance as well as an interesting history, and is largely visited by Londoners and tourists. Population of borough (1901), 96,770.

Greenwich Observatory.—The Royal Observatory of England, situated in Greenwich Park, near London, was founded in 1675.

Greenwood Cemetery.—Situated in Brooklyn, N. Y. It is about 400 acres in area and is ornamented with forest trees. It was opened for interments in 1840.

Gregg, David McMurtrie, 12, 15.

Gregg, John Irvin, 12, 15.

Gregg, Maxcy, 12, 15.

Gregorian calendar, 13, 90, 98.

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- Gregory I., Saint** — "The Great" (540-604), was Pope (590-604). In 597 he sent Saint Augustine to Britain to convert the people of that country.
- Gregory, Pope**, 10, 260.
- Gregory VII.**, Pope Hildebrand, 10, 243, 260.
- Gregory XVI.**, Death of Pope, 11, 2.
- Grenada.**— One of the group of the Windward Islands, which form the eastern barrier to the Caribbean Sea, in the West Indies. It is the largest group and belongs to Great Britain; its area is 133 square miles, with a population of 64,098. The island was settled by the French in 1651, taken by the British in 1762, and again occupied by the French during the years 1779-83. The capital is St. George, the seat of the governor of the Windward Islands and his administration, an executive council of six and a legislative council of thirteen, seven of the number being nominated by the Crown. The chief products are cocoa, coffee, sugar, fruits, cotton, and spices.
- Grenada lost by the Moors**, 10, 280.
- Gresham, Walter Quinton**, 12, 16, 287.
- Gretna Green.**— A small village 8 miles north of Carlisle, and just over the border between England and Scotland. It became notorious for the hasty marriages of runaway parties from England. A law passed in 1856 requires a residence in Scotland of one of the parties for some weeks prior to the marriage to render the contract valid.
- Greuze, Jean Baptiste**, 9, 264.
- Grevy, President**, 10, 384.
- Grey, Lady Jane.**— (1537-1554.) The great-grand-daughter of Henry VII. of England. She was famous for her great learning. On the death of Edward VI., in July, 1553, she was proclaimed queen; but was arrested in Nov., and beheaded on a charge of high treason.
- Greyhound**, 4, 19.
- Gridley, Jeremiah**, 11, 58.
- Gridley, Richard**, 11, 99.
- Grieg, Edward Hagerup**, 9, 107.
- Grierson, Benjamin Henry**, 12, 16.
- Crierson's raid**, 12, 16.
- Griffin, Charles**, 12, 16.
- Griffin, Edward Dorr.**— Born at East Haddam, Conn., 1770; died at Newark, N. J., 1837. He was president of Williams College (Williamstown, Mass.), 1821-36, and author of "Lectures in Park Street Church."
- Griffis, William Elliot.**— Born at Philadelphia, 1843. In 1870 he went to Japan as organizer of schools on the American plan, was appointed superintendent of education in the province of Echizen in 1871, and professor of physics in the Imperial University of Tokio (1872-74); subsequently, on his return to America, he became pastor of a reform church in Schenectady, N. Y., and of the Congregational Church in Ithaca, N. Y. He wrote "The Mikado's Empire."
- Grilse**, 4, 294.
- Grimaldi, Joseph.**— (1779-1837.) An English actor and pantomimist.
- Grimes, James Wilson**, 12, 287.
- Grimke, Frederick.**— Born at Charleston, N. C., 1791; died in 1863. An eminent American jurist, and brother of T. S. Grimké. He was appointed a judge of the supreme court of Ohio in 1836, and was the author of "Nature and Tendencies of Free Institutions."
- Grimké, Sarah Moore.**— Born at Charleston, S. C., 1792; died, 1873; sister of T. S. Grimké, and noted as an Abolitionist. She was the author of "Letters on the Condition of Woman and the Equality of the Sexes."
- Grimké, Thomas Smith.**— Born at Charleston, S. C., 1786; died near Columbus, Ohio, 1834. A noted American lawyer and lecturer. He was elected a member of the state senate of S. C. in 1826, and became a prominent member of the American Peace Society and one of the pioneers in temperance reform. He was the author of "Addresses on Science, Education, and Literature."
- Grimm, Jacob**, 8, 355.
- Grimm's law**, 8, 355.
- Grindstone**, 7, 202.
- Grinnell.**— A city in Iowa, seat of the Iowa Congregational College. Pop. (1900), 3,860.
- Grinnell, Henry**, 11, 380.
- Griqualand, East.**— A dependency of Cape Colony, in South Africa, governed by magistrates appointed by the Cape authorities. The capital is Kokstadt.
- Griqualand, West.**— A district of Cape Colony, west of the Orange River Colony. It is well known on account of its diamond fields. The capital is Kimberley.
- Griselda.**— A character of romance endowed with remarkable patience under suffering and trying ordeals as wife and mother.
- Griswold, Roger**, 11, 241.
- Griswold, Rufus Wilmot.**— Born at Benson, Vt., 1815; died at New York, 1857. He was editor of "Graham's Magazine" (1841-43), and of the "International Magazine" in 1852. His chief works are "Poets and Poetry of America," "Prose Writers of America," "Female Poets of America," "The Republican Court."
- Grizzly bear**, 4, 34.
Habits of the, 4, 34.

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- Grocer and his business**, by Francis B. Thuber, 13, 389.
- Grolier Club**.—Founded in New York, 1884, and incorporated, 1888, for the encouragement of book-making as an art.
- Groomsman, Duties of a**, 1, 48.
- Gros, Antoine Jean**.—(1771-1835.) A French painter of historical subjects.
- Grosbeaks**, 4, 188.
 Blue, 4, 188.
 Evening, 4, 188.
 Rose-breasted, 4, 188.
 Sociable, 4, 200.
- Gross**, 13, 151.
 Great, 13, 151.
- Gross, Samuel D**—Born near Easton, Pa., 1805; died at Philadelphia, 1884. A noted American surgeon. His chief works are "Elements of Pathological Anatomy," "System of Surgery."
- Gros Ventre Indians**.—Two separate tribes of wandering Indians. The Gros Ventres of the plains claim to have separated from the Arapahoes. After their separation they joined first one tribe and then another, and because of their treachery suffered many hostile attacks from their neighbors. In 1824 they settled with the Blackfeet near the Milk River. Their greatest chief was Sitting Squaw. Treaties were made with them 1851, 1853, 1855, 1865, and 1868. In 1870 they were joined by their kindred the Arapahoes, and are now (1906) occupying a portion of the Blackfeet reservation in Mont. They number about 1,500.
- Grote, George**.—(1794-1871.) An English historian. His great work is a "History of Greece."
- Groton**.—(1) A town in Conn., the site of Fort Griswold, the scene of a massacre of American troops by the British under Benedict Arnold in 1781; pop (1900), 5,962.
 (2) A town in Mass., the seat of Lawrence Academy; pop (1900), 2,052.
- Grotta de Cane**.—A grotto near Naples. The carbonic-acid gas which collects in it is dangerous to life. The gas being heavy lies near the ground; above the air is pure. A dog breathes the carbonic acid gas and soon becomes unconscious, while men being taller breathe only air. Hence the name which means "grotto of the dog."
- Grotto del Cane**, 5, 154.
- Ground-hog**, 4, 44.
 foretelling the weather, 4, 45.
 Habits of the, 4, 44.
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 Hunting the, 4, 44.
- Ground-hog—Continued**.
 Superstitions regarding the, 4, 45.
 Taming the, 4, 45.
- Ground squirrel**, 4, 58.
- Grouse**, 4, 123.
 Canada, 4, 126.
 Dusky, 4, 126.
 Eggs of the, 4, 116.
 Eggs of the pinnated, 4, 117.
 Nest of the, 4, 116.
 Nest of the pinnated, 4, 116.
 Ruffed, 4, 125.
 Sharp-tailed, 4, 123.
- Grove, Sir William Robert**.—(1811-1896.) An English physicist, noted for the invention of the voltaic battery, known as "Grove's Battery."
- Groveton (Va.), Battle of**.—See MANASSAS, BATTLE OF.
- Grow, Galusha Aaron**, 12, 288.
 on "Politics as a Career," 12, 418.
- Growth of a child, Average**, 2, 91.
 Dr. Nathan Oppenheimer quoted on, 2, 93.
- Growth of instinct into love**, 2, 1.
 Consciousness, Development of, 2, 1.
 Life, Struggle for, 2, 1.
 Love, 2, 2.
 and wisdom, 2, 6.
 Parental, 2, 2.
 Sarcasm, 2, 3.
 Scolding, 2, 3.
 Wisdom and love, 2, 6.
- Grundy, Felix**.—Born in Va., 1779; died at Nashville, Tenn., 1840. He was elected U. S. senator from Tenn. in 1829, and attorney-general (1830-1840).
- Grundy, Mrs.**—A character in Morton's comedy "Speed the Plough," who is a rival of Mrs. Ashfield, who is constantly wondering "What will Mrs. Grundy say?" The phrase is proverbial for propriety, morality, and observance of the conventionalities.
- Guadalupe-Hidalgo, Treaty of**.—Named from the Mexican village where Nicholas P. Trist, on behalf of the U. S., Feb. 2, 1848, signed the treaty with Mexico terminating the war with that country and ceding to the U. S. the territory now comprising Nev., Utah, most of Ariz., a large part of N. Mex., parts of Col. and Wyo., and all of Cal. It fixed the Rio Grande as the boundary between Mexico and Tex. The U. S. agreed to pay Mexico \$15,000,000 and to assume the claims of its citizens against Mexico existing before the treaty. Mexicans in the ceded territory were allowed to remain, at their option, and were assured protection as citizens.
- Guadeloupe**, one of the Leeward group of

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- the Lesser Antilles, is, with its five dependencies, consisting of the smaller islands of the region, the chief French possessions in the West Indies, together with the island of Martinique. Guadeloupe consists of two islands, Basse-Terre and Grande-Terre, separated by a narrow salt-water river. The colony is represented at Paris by a senator and two deputies, and has an area of 583 square miles, with a population of 167,000, including about 15,000 coolies. The chief town is Pointe-à-Pitre (pop., 17,242), with a fine harbor; but the seat of government is Basse-Terre (pop., 7,762). The chief products are sugar, rum, coffee, cacao, bananas, and cotton. There is valuable timber on the island, but it is as yet little worked.
- Guaiacum officiale**, 5, 3.
- Guam**.—The largest in the Marianne or Ladrone group of islands, situated about 1,500 miles east of Luzon, in the Philippines, and 5,000 miles west of San Francisco. The island was taken by the U. S. cruiser, "Charleston" in June, 1898, and ceded by its former possessors, the Spanish. The area is about 160 square miles, with a population, chiefly Charmerros and other immigrants from the Philippines or their descendants, of 8,660. Agaña is the chief town, with a population of 5,250; it has an excellent roadstead and harbor. The island is subject to typhoons; it is densely wooded, well-watered, and fertile. The government has made the island a naval station and a coal-ing depot.
- Guanaco**, 4, 93.
 Characteristics of the, 4, 94.
 Geographical range of the, 4, 93.
 Habits of the, 4, 93.
- Guano**.—A valuable manure and land fertilizer, consisting of the faecal deposits or droppings of animals and birds, chiefly of sea-fowl, which owing to peculiar conditions has accumulated in great masses in certain regions of the globe. The richest and most important guano comes from the coasts of Bolivia and Peru, where sea-fowl congregate largely in the hot and arid districts, where there is little or no rainfall to wash away its rich nitrogenous matter. Phosphatic guanos, when washed with sulphuric acid to render them readily soluble, are largely used with beneficial effect on root crops.
- Guantanamo Bay, Cuba**, 12, 288.
- Guard, National**, 12, 339.
- Guasimas, Las**, 12, 288.
- Guatemala**.—The most northern republic of South America, governed under a constitution which dates from 1879, though subsequently modified. The executive is vested in a President and six heads of departments. It has an army of 7,000 officers and men, and a militia force of about 57,000 effectives. The soil is fertile, producing coffee, cocoa, tobacco, sugar, bananas, etc., while the Republic is a large exporter of hides and skins, and is beginning now to export rubber, with some minerals. The capital is Guatemala la Nueva, which is also the seat of government (pop., about 75,000). The area of the Republic is estimated at about 48,290 square miles, with a total population of 1,574,340, two-thirds of which are pure Indians or half-castes.
- Guatemala**, explored by De Soto, 11, 40.
- Guatimozin**, executed, 11, 38.
- Guayaquil** (*gwi-ä-kël*).—The most important town in Equador, in South America. It is situated on the Guayaquil River. Pop., 50,000.
- Guelfs**, or **Guelphs**.—The party which, composed of those who favored the papal authority and the people's cause, opposed the Ghibellines or representatives of the aristocracy in Italy in the Middle Ages.
- Guelph**.—A city in Ontario, Canada, on the river Speed, about 50 miles from Toronto. Pop. (1901), 11,496.
- Guelphs**, 10, 277.
- Guercino**, 9, 253.
- Guericault, Theodore**, 9, 266.
- Guerin, Baron**, 9, 267.
- Guernsey**.—One of the Channel Islands. Capital, St. Peter Port. Pop., 35,339.
- "**Guerrier**," **The**, 11, 241.
- Guest of honor**, at dinners, 1, 51.
 Guests, 1, 42.
 Duties of, 1, 42.
 at dinner, Seating, 1, 51.
- Guggenheimer, Randolph**, on an imperfect education, 8, 90.
- Guiana**.—A division of South America on the northeast coast. It is divided into British, French, and Dutch Guiana. The capitals of these parts are Georgetown, Cayenne, and Paramaribo respectively.
- Guido Geni**, 9, 253.
- Guildford Court House (N. C.)**, **Battle of**, 11, 99.
- Guillotin** (*gê-jō-tan'*), **Joseph Ignace**.—(1738–1814.) A French physician, erroneously regarded as the inventor of the guillotine. He proposed decapitation as the means of capital punishment. The machine was the invention of a German mechanic, named Schmidt. Dr. Guillotin was not executed, as popularly believed, but died from natural causes.
- Guinea**.—An area lying along the western coast of Africa and extending indefinitely inland.

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Guinea, Gulf of.—That portion of the Atlantic Ocean which washes the bend of the west coast of Africa, stretching from Cape Palmas to Cape Lopez.

Guinea hen, 4, 109.

Eggs of the, **4, 116.**

fowl, **4, 109.**

Gold, **13, 163.**

Nest of the, **4, 116.**

pig as a pet, **1, 154.**

Guinevere (*gwin'e-vēr*).—The wife of the mythical King Arthur, 1783.

Guise, Duke of, 10, 295.

Guiteau, Charles Jules.—Born about 1840; hanged at Washington, 1882; the assassin of President Garfield, July 2, 1881.

Guizot, Francis Pierre Guillaume.—(1787–1874.) A French statesman and historian.

Gulf, Army of the.—A grand division of the Union army during the Civil War, composing the troops operating in La., Tex., and southern Miss. and Ala., having its headquarters at New Orleans. It was commanded first by Gen. Benjamin F. Butler and then by Gen. Nathaniel P. Banks. Its principal battles were Baton Rouge, in 1862; Port Hudson in 1863; and the actions of the Red River campaign in 1864.

Gulf, Army of the, 12, 16.

Gulf of St. Lawrence.—An arm of the Atlantic washing the eastern shore of Canada. It narrows to the estuary of the River St. Lawrence.

Gulf Stream.—A current of warm water from the equator which divides into two parts; one of which flows around the Gulf of Mexico and through Florida Straits where it is joined by the other which flows on the west coast of Cuba. Together they flow northeasterly at a velocity of from 2 to 5 miles an hour and cross the Atlantic. The warm water coming in contact with ice off Newfoundland causes the fogs, and it also exerts a modifying effect upon the climate of England.

Gulf-weed, 5, 103.

Gull, 4, 216.

Black-headed, **4, 218.**

Bonaparte's, **4, 218.**

Burgomaster, **4, 217.**

Eggs of the American herring, **4, 116.**

Herring, **4, 217.**

Laughing, **4, 218.**

Nest of the American herring, **4, 116.**

Ring-billed, **4, 217.**

Gum-boil.—An abscess near the root of a tooth. Care must be taken to protect from cold until suppuration or the formation of

matter occurs, when relief is to be given by lancing.

Gun-cotton, 5, 174, 204.

Gundebald, 10, 406.

Gun-metal, 5, 211.

Gunnison Cañon.—A remarkable cañon in the Gunnison River, Col., 15 miles in length.

Gunpowder, 5, 203.

Composition of, **5, 203.**

First use of, **12, 290.**

Manufacture of, **5, 204.**

Gunpowder Plot.—In 1605, certain of the Roman Catholics of England formed a conspiracy to destroy James I., the lords and commons, in the Parliament House, London. The leaders were Percy, Digby, Catesby, Winter, Guy Fawkes, and others. Fawkes was arrested and the conspiracy failed. The date set for firing the mine which was to effect the destruction was Nov. 5, 1605,—since called Guy Fawkes' Day.

Gunpowder Plot, 10, 319.

Smokeless, **5, 174, 204.**

Guns and gunmaking, 5, 380.

Gunsaulus, 9, 360.

Gunter's chain, 13, 159.

Gurley, Ralph Randolph, 11, 381.

Gustatory nerve, 1, 284.

Gustavus, Adolphus, 10, 308.

Guthrie.—The capital of Oklahoma Territory, about 30 miles north of Oklahoma. Pop. (1900), 10,006.

Guthrie, James, 11, 381.

Guthrum, 10, 246.

Guttersnipe, 4, 132.

Guy Fawkes, 10, 319.

Guyot, Arnold Henry.—(1807–1884.) The most eminent student of physical geography of the century.

Gwyn, Nell.—(1650–1687.) An English actress, and courtesan of Charles II. of England.

Gylippus, 10, 200.

Gymnasium training, for recklessness, 2, 322.

Gymnastics versus athletics, 6, 18.

Gymnosperms.—Naked-seeded plants, such as the pine and other Coniferæ, in which the pollen comes into direct contact with the ovules.

Gypsum.—A widely-distributed mineral, composed essentially of sulphate of lime and water. Pure and crystallized gypsum is clear and transparent, but varieties are obtained of all shades of gray, red, brown, and black. Selenite includes all the transparent crystallized varieties, and of uncrystallized alabaster is the finest. It is rendered anhydrous by burning, and when calcined is known as Plaster of Paris. This calcined gypsum is used largely as

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a fertilizer. The production of the mineral in 1899 in this country was fully 425,000 short tons, valued at over a million dollars. France mines annually nearly 2,000,000 tons, while over 200,000 tons are raised each in Great Britain and in Canada. The chief producing states of the Union in which gypsum is found are Michigan, Kansas, Texas, New York, Iowa,

and Ohio; it is also mined to some small extent in other states of the West—in California, Colorado, Arizona, Utah, So. Dakota, Oregon, Indian Territory, Oklahoma Territory, and, also in Wyoming and Virginia. It has also been discovered in Florida.

Gypsum, 5, 444.

H

Haag, Edward Newton, on "The Shoe Trade," 13, 393.

Haarlem.—An ancient town of Holland.

Haas, Johannes Hubertus Leonardus de.—(1832–1880.) A noted animal painter.

Habberton, John.—Born, 1842. American writer; author of "Helen's Babies."

Habeas Corpus, Writ of.—A writ issued by courts of law or equity to compel the production of the body of a person alleged to be illegally detained and to show the reason for such detention that the court may judge of its sufficiency.

Habeas Corpus Act, 8, 15.

Habenaria fimbriata, 5, 20.
 psycoides, 5, 26.

Habit, 14, 249.

 defined, 2, 457.

 forming, 2, 457.

 How to correct a bad, 2, 461.

 of courtesy, 2, 462.

 of honesty, 2, 461.

 of self-reliance, 2, 462.

Habits, A Bundle of Iron, 14, 249.

 largely based on experience, 2, 458.

 of cleanliness, 2, 461.

 of industry, 2, 323.

Hackensack.—In New Jersey, capital of Bergen County. Pop. (1900), 9,443.

Hackett, James Henry.—(1800–1871.) A noted American actor.

Hackleman, Pleasant A., 12, 16.

Hackmatack, 4, 458.

Haddock, 4, 287.

 Characteristics of the, 4, 287.

 Finger-marks of St. Peter on the, 4, 287.

 Flesh of the, 4, 287.

 Food of the, 4, 287.

 Habits of the, 4, 287.

 Reproduction of the, 4, 287.

Hades, 10, 102.

Hading, Jane Alfrédine Tréfourer.—Born at Marseilles, 1859; a noted French actress.

Hadley, Arthur T., on a college education, 8, 73.

 on college men in business, 8, 202.

Hadrian, Publius E. H.—A Roman emperor, born in A. D. 76 and died A. D. 138. His rule began in A. D. 117, when the empire was disturbed by a revolt among the warlike Parthians, and by insurrections in Egypt and Syria. He however did not care for war, but spent his time in traveling about the Roman provinces, and seeing that they were well governed and that his troops were disciplined and well trained. He visited Britain, and to protect the boundaries there of the Roman province, he built the wall, called by his name, between the mouth of the Tyne and the Solway, to prevent the Picts and Scots from making forays to the south of it.

Hadrian, 10, 228.

Hadrian's laws, 10, 228.

Hadrian's wall, 10, 228.

Haeckel, Ernst.—Born, 1834; an eminent German naturalist, and an exponent of Darwinism and the biological theory of Evolution.

Haematoxylon Campeachianum, 5, 3.

Hafiz, Shams ed-din Muhammad.—Born early in the 14th century. A Persian poet, philosopher, and divine. His tomb at Shiraz, his birthplace, is still a resort for pilgrims.

Hagar and Ishmael, Story of, 3, 243.

Hagen, Hermann August.—(1817–1893.) A noted German-American entomologist.

Hagenbach, Karl Rudolf.—(1801–1874.) A German-Swiss Protestant theologian and church historian.

Hagerstown.—A city in Md., on Antietam Creek; noted for its manufactures. Pop. (1900), 13,591.

Haggard, H. Rider.—Ditchingham House, Norfolk, Eng., (1855–) spent his early life as a government official in S. Africa, where he hoisted the British flag over the Transvaal in 1877; leaped into fame with "King Solomon's

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- Mines" (1886), and was first favorite as a writer of African adventure novels; he still travels and romances, but is plunged in rural depopulation problems and East Anglian agricultural affairs, playing the rôle of a gentleman farmer (new style).
- Hague, The.**—A city in Holland, the seat of the Netherlands Government, situated within 3 miles of the North Sea, and about 34 miles S. E. of Amsterdam. It is the official and diplomatic capital, the meeting place of the States-general, and in early times the abode of the counts of Holland. It derives its name from the "Haeg," or hedge, inclosing the magnificent park, with its majestic trees, which was the ancient hunting-ground of Dutch nobles. It has a royal library, palaces, and fine civic town hall. In 1899, it was the meeting place of the International Peace Conference summoned by the Czar of Russia. Pop. (1899), 206,000.
- Hahnel, Ernst,** 9, 404.
- Hail,** 5, 167.
how formed, 5, 162.
- "**Hail Columbia!**"—An American patriotic song, written by Joseph Hopkinson, 1798. The words were set to the music of the "President's March," and the song has attained great popularity.
- Hailmann quoted on Froebel,** 2, 120.
- Hainan.**—An island belonging to the province of Kwangtung, China; it lies between the China Sea and the Gulf of Tongking. Estimated area from 12,000 to 14,000 square miles. Pop., about 2,000,000.
- Hainaut, or Hainault.**—A province of Belgium; capital, Mons. Area, 1,437 sq. miles. Pop. (1899), 1,133,672.
- Hair treatment,** an occupation for women, 7, 423.
- Hairy woodpecker,** 4, 179.
- Haiti, or Hayti.**—An island republic (formerly a French colony) situate in the Greater Antilles group of the West India Islands, midway between Cuba and Porto Rico. The republic of Santo Domingo forms the eastern portion of the island; both countries have been the scenes of bloody revolutions. The Dominican Republic was founded in 1844, when it became independent of Spain. Haiti was early settled by French buccaneers, and between their descendants (the mulattos) and the blacks there have been many serious conflicts. Under one of the revolutionary leaders of the blacks, the famous Toussaint L'Ouverture, the whole island was in 1801 practically in his hands, and it cost France an expedition and considerable fighting to recover its possession for a time. It was proclaimed independent in 1804, and is governed under a constitution, which dates from 1889. Haiti has an area of 10,204 sq. miles, and a population estimated at about a million. The capital is Port-au-Prince.
- Hake,** 4, 287.
Commercial value of the, 4, 287.
- Hakluyt, Richard.**—Died at London, 1616. A noted English geographer.
- Halcyon,** 4, 146.
- Halcyon days, Origin of,** 4, 146.
- Haldeman, Samuel Stedman.**—(1812–1880.) A noted naturalist and philologist.
- Haldeman, Samuel Stedman,** 13, 199.
- Hale, Edward Everett.**—Born at Boston, Mass., 1822. Author, editor, and Unitarian clergyman. He occupied many editorial positions, some on magazines founded by himself. His most popular work was "The Man Without a Country," which appeared in the "Atlantic Monthly" in 1861.
- Hale, Edward Everett,** on the secret of success, 8, 116.
- Hale, John Parker,** 11, 381; 12, 288.
- Hale, Mrs. (SARAH JOSEPHA BUELL).**—(1790–1879.) Editor of the "Ladies' Magazine" (Boston) and of "Godey's Lady's Book" (Philadelphia).
- Hale, Nathan,** 11, 100.
- Halévy, Ludovic.**—Born at Paris, 1834. A French dramatist and author.
- Half-chick,** Spanish fairy tale, 3, 59.
- Haliburton, Thomas Chandler.**—(1796–1865.) An Anglo-Canadian lawyer and humorist, familiarly known by his pen name of "Sam Slick."
- Halibut,** 4, 273.
Characteristics of the, 4, 273.
Chicken halibut, 4, 273.
Fishing for, 4, 273.
Flesh of the, 4, 273.
Food of the, 4, 274.
- Halicarnassus.**—One of the Greek cities in Asia Minor, on the Ceramic Gulf. It was so strongly fortified that it held out against the siege of Alexander the Great, that on its reduction, Alexander ordered it to be destroyed by fire.
- Halidon Hill.**—In Scotland, near Berwick, the scene in 1333 of the defeat of the Scots by the English.
- Halieus,** 10, 81.
- Halifax, Nova Scotia.**—Founded in 1749, a city and seaport, on a beautiful harbor of the Canadian province of N. S., the chief naval station of Britain in North America. The opening of the Seven Years' War saw the

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- harbor filled with the warships and transports of the expedition sent out by Pitt against Louisburg and Quebec. Here also, during the Revolutionary War, were gathered the royal forces which were launched with such ill-success against the insurgent American colonies; and here, too, after the war, streamed the 10,000 exiled Loyalists who sought new homes for themselves under the British flag. The water-approaches to the town frown with forts and batteries. The chief buildings of interest are the Citadel, the Provincial Legislative Chambers, etc., together with the fine residences along the Northwest arm. The town of Dartmouth is on the opposite side of the harbor.
- Halifax commission**, 12, 289.
- Hall, Bishop**, 14, 38.
- Hall, Charles Francis**.—(1821-1871.) A noted American Arctic explorer.
- Hall, G. Stanley**, on "How to Tell a Story," 3, 6.
- Hallam, Henry**.—An eminent English historian, born in 1777, and died in 1859. His writings are highly valued by students of history, especially his notable work, entitled "View of the State of Europe during the Middle Ages," and his "Constitutional History of England, from the Accession of Henry VII. to the Death of George II." He has also written a compendious and careful "Introduction to the Literature of Europe in the 15th, 16th, and 17th Centuries." He was a man of great erudition and wide reading. His son, Arthur Henry Hallam (b. 1811, d. 1833), whose "Remains" were published, with a "Life" by his father, was the intimate and close friend of Tennyson in his youth, and forms the subject of that grand poem of our age, "In Memoriam," if, indeed, he is not the inspirer of it.
- Hall carpets**, 1, 12.
 Ceiling decoration, 1, 11.
 decoration, 1, 11.
 Floor covering for the, 1, 11.
 furniture, 1, 12.
 Pictures in the, 1, 12.
 rugs, 1, 12.
- Halle**.—A city of Prussian Saxony, Germany. Its university was founded by Frederick I., 1694. Pop. (1900), 156,611.
- Halleck, Fitz-Greene**.—(1790-1867.) An American poet; one of the original trustees of the Astor Library.
- Halleck, Henry Wagner**, 12, 16.
- Halley, Edmund**.—(1656-1742.) A celebrated English astronomer.
- Halley, John**, 14, 95.
- Hallowe'en**, 13, 91.
- Halpine, Charles Graham**, 12, 17.
- Hals, Frans**, 9, 301.
- Hamadan**, 10, 186.
- Hamburg**.—A free city and important seaport of Germany, situated on the Elbe, 170 miles N. W. of Berlin. It is a great emigrant port for northern Europe, and next to London and Liverpool the most important commercial town in Europe. In the Middle Ages, Hamburg was, with Lübeck and Bremen, one of the chief towns of the Hanseatic League, a great confederation of towns on the Baltic and neighboring states, formed in the 13th century, for the protection of commerce. It retains to-day some of its old-time privileges in the German empire, being not only a free city, but a state and republic, with a territorial area of 158 square miles and a population of 768,349, of which 705,738 form the population of the city. In 1888, it was incorporated in the Zollverein, a union of the German states for the maintenance of a common tariff on imports from other countries and of free trade among themselves.
- Hamburg fowl**, 4, 106.
 Spangled, 4, 106.
- Hameln, or Hamelin, The Pied Piper of**.—A magician of mediæval legend, who, in 1284, being refused payment for his services in clearing the town of rats, led away by his magical playing 130 children, who entered into a hill (Koppenberg) and were never afterward seen. The story is the subject of a poem by Robert Browning. China and Persia have similar legends.
- Hamerton, Philip Gilbert**.—An English writer on art, landscape painting, and etching, as well as on literature. Born in 1834, he died sixty years later (1894). His works embrace "Etching and Etchers," "Contemporary French Painters," "Painting in France," "The Graphic Arts," and an instructive and delightful work entitled "Thoughts on Art." In literature proper, he published "The Intellectual Life," and "Human Intercourse," the latter a collection of essays on life and society. He founded and edited for many years a well-known art journal, "The Portfolio," and also published a series of excellent biographies of French artists, under the title of "Five Modern Frenchmen."
- Hamilcar**.—Surnamed BARCA, a noted Carthaginian general and father of Hannibal, who lived about the close of the First Punic War. At this period, Rome had gained her first possession outside Italy, *viz.*, Sicily, and here the Romans and Carthaginians first encountered

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- each other. Rome had also her eyes on Spain, but Hamilcar desired to make it a Carthaginian province. He therefore got his countrymen to send him thither, where he conquered all Spain up to the river Tagus, after which he designed to fight the Romans on their own soil. He was, however, killed about 228 B. C., while fighting the Vettones, and Hasdrubal, his son-in-law, went on with his conquests, till he, too, was killed (in 221), and Hannibal became general of the Carthaginians at the age of twenty-six.
- Hamilcar Barca**, 10, 214.
- Hamilton**.—(1) A town in N. Y., on the Chenango, the seat of the Baptist institutions, Hamilton Theological Seminary and Colgate University. Pop. (1900), 1,627. (2) A city in Ohio, on the Miami River, noted for its manufactures. Pop. (1900), 23,914.
- Hamilton, Alexander**, 11, 153; 14, 87.
and Jefferson, Pen pictures of, 11, 172.
Political conceptions of, 11, 176.
- Hamilton, Andrew Jackson**, 12, 17.
- Hamilton, Charles S.**, 12, 17.
- Hamilton, Gail**.—The pseudonym of Mary Abigail Dodge, a popular writer. (See DODGE, MARY ABIGAIL.)
- Hamilton, Paul**, 11, 241.
- Hamilton, Schuyler**.—Born at New York, 1822. An officer of the U. S. army.
- Hamilton, Sir William**.—A distinguished Scottish philosopher and metaphysician, born in 1788, and died in 1856. He was for twenty years professor of logic and metaphysics at the University of Edinburgh and a large contributor to the "Edinburgh Review." His writings embrace, besides his lectures on "Logic" and on "Metaphysics," "Discussions in Philosophy, Literature, and Education," and "Philosophy of the Unconditioned." He also edited editions of the works of the Scottish philosophers, Thomas Reid and Dugald Stewart.
- Hamilton College**, aid to poor students, 8, 47.
- Hamlin, Hannibal**, 12, 289.
- Hammer, The**, 7, 157.
Claw-hammer, 7, 157.
Tack-hammer, 7, 157.
- "**Hammerer**," The, 12, 17.
- Hammerfest**.—A seaport of Finnmarken, Norway; the usual starting point for Arctic expeditions.
- Hammond, Henry**.—(1605-1660.) A celebrated English divine and scholar.
- Hammond, John Hays**, 13, 445.
- Hammond, William Alexander**.—(1828-1890.) A noted American physician and surgeon. Surgeon-general of the army, 1862-64.
- Hampden, John**.—An English patriot, statesman, and soldier of the era of Charles I., who resisted that monarch's arbitrary rule and illegal taxation. He was one of the three great commoners of the period,—Hampden, Pym, and Cromwell,—the leaders of the patriotic party in the Short and the Long Parliaments, and one of the five members who brought forward the "Grand Remonstrance," complaining of the king's misgovernment, and who in 1642 were impeached by Charles. He is especially known as having tested in the courts the legality of the ship-money tax, and stood valiantly for the defense of the rights and privileges of Parliament against royal encroachment. His attitude and that of his fellow-commoners precipitated civil war. In the early battles of the war, Hampden, fought on the Parliamentary side, and was killed in a skirmish at Chalgrove Field, in 1643.
- Hampton, Wade**, 12, 18.
- Hampton Court**.—A royal palace erected by Cardinal Wolsey; its site is on the Thames, 12 miles from Charing Cross, London.
- Hampton Normal and Agricultural Institute**.—A training school near Hampton, Va., for negro and Indian young men and women to become teachers among their own people. It was founded by Gen. S. C. Armstrong in 1868, and incorporated by the state of Va., in 1870.
- Hampton Roads**.—A channel south of Fort Monroe, Va., connecting Chesapeake Bay with the estuary of James River. (See HAMP-TON ROADS, BATTLE OF.)
- Hampton Roads, Battle of**, 12, 17.
Conference, 12, 17.
- Hancock, John**, 11, 100.
- Hancock, Winfield Scott**, 12, 18.
- Hancock House**.—An ancient building which formerly stood in Boston, Mass., and was the residence of Gov. John Hancock (1790-93). It was demolished in 1863.
- Hand-ball analyzed**, 6, 19.
- Händel, George Friedrich**, 9, 108.
referred to, 14, 7, 23.
- Handkerchiefs, To iron**, 1, 31.
- Han dynasty**, 10, 151.
Eastern, 10, 151.
- Hanecy, Judge Elbridge**, 1, 245.
- Hanging Rock (S. C.), Battle of**, 11, 100.
- Hang-nest, The**, 4, 163.
- Hanna, Marcus Alonzo**, 12, 289.
- Hannibal, Life of**, 10, 214.
- Hannibal**.—A city in Mo., on the Mississippi River, noted as a railway, commercial, and manufacturing center. Pop. (1900), 12,780.
- Hanover**.—A province in Prussia. The capital is Hanover. Pop., 194,878.
- Hanover Court House (Va.), Battle of**, 12, 18.

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Hanseatic League.—Signed 1241. A confederation of the cities of North Germany and adjacent countries, having for its object the promotion of commerce and the protection thereof from pirates, robbers, and other enemies. The cities belonging to the League were called the Hanse towns. The last assembly was held in 1669.

Hansel and Grettel, German fairy tale, 3, 94.

Hans Kraut, Nuremburg potter, 1, 219.

Hanson, Timothy, 5, 89.

Hanuman, the monkey god, 10, 13.

Hapsburg, or Habsburg, House of.—A German princely family, many of whose members have worn the crown in Germany, Austria, and Spain. The founder of the House was Count of Hapsburg, whose castle was on the Aar River, in the Aargau, a canton of Switzerland. Since this Count's day many descendants of the family have played a leading part in the history of Continental Europe, and some representatives of the House wore the imperial crown of the Holy Roman Empire. The present imperial family of Austria, including the King, Francis Joseph I., are descended from the Counts of Hapsburg.

Hapsburg, House of, 10, 275.

Harbor's, The World's Finest.—San Francisco may fairly claim to have the most capacious natural harbor of any of the world's great trading marts. It is also one of the safest. It is entered through the Golden Gate, a passage a mile wide and thirty-five feet deep at low tide—admitting the largest ships afloat without danger of grounding. The landlocked bay of which this harbor is part is fifty miles long, and averages five miles in width. There all the shipping of the entire globe could anchor in perfect safety. Port Philip Bay, the chief harbor of Victoria, Australia, is larger than the Bay of San Francisco, being about thirty-eight miles long by thirty broad, but its very breadth, with its surroundings, leaves it exposed to storms from certain quarters. Port Jackson, on which Sydney, New South Wales, Australia, is located, is a magnificent harbor, completely landlocked, extending inland, in some places, fully twenty miles, and having ample depth of water for vessels of the heaviest burden. The harbors of New York City, Rio Janeiro, Brazil, and Havana, Cuba, are capacious and secure. Next come those of Boston; Norfolk, Va.; Portland, Me.; Halifax, N. S.; Copenhagen; Constantinople; Hong Kong; Yokohama, and Nagasaki.

Harcourt, Rt. Hon. Sir William Vernon, M. P., Malwood, Lyndhurst, England, (1827–); Mr.

Gladstone's lieutenant in the leadership of the Liberal party; had a brilliant career at Cambridge and at the Bar; Home Secretary in the 1880-85 Govt.; as Chancellor of the Exchequer in 1894 he carried through the most remarkable budget of recent years, equalizing the death duties and reforming the income tax; retired from the leadership of the Liberal party in the Commons, December, 1898; a witty and impressive orator, he has no superior as a parliamentary debater; was one of the original Saturday Reviewers ("Historicus"); is a trenchant controversialist—witness his later attacks on the bishops—a famous talker, a magnificent political fighter.

Hardee, William J., 12, 18.

Hardicanute, 10, 249.

Harding, Chester, 9, 331.

Hard Tack, 12, 18.

Hardware Business, 13, 399.

Hard water, To soften, 1, 25.

Hardy, Arthur Sherburne.—Born at Andover, Mass., 1847. An American novelist.

Hardy, Thomas.—An English novelist of high rank, who deals, for the most part, with types of rustic life in his own county of Wessex, England, and the realism of every-day existence. Born in Dorsetshire in 1840, he at first became an architect, but later on was drawn to literature, and especially to novel-writing.

Hare, American, or Northern, 4, 43.

Hare and hounds, 6, 169.

Belgium, 4, 44.

Jack-rabbit, 4, 43.

Prairie, 4, 43.

Harebell, 5, 28.

Hargreaves, James.—Died, 1778; an English mechanic, inventor of the spinning-jenny.

Harlan, James, 12, 289.

Harlan, John Marshall, 12, 289.

Harlem.—That part of New York City lying north of 106th street and south of the Harlem River.

Harlem Heights, Battle of, 11, 100.

Harlequin snake, 4, 245.

Harmon, Ruben, Jr., 13, 158.

Harmon-Brown, Helen, on "Women in Business," 7, 436.

Harmony, 9, 204.

Harmsworth, Sir Alfred, on the secret of success, 8, 124.

Harney, William Selby, 12, 180.

Harold I.—(1035-1040.) King of England and younger son of Canute.

Harold II.—The second son of Earl Godwin of England. Opposed William, Duke of Normandy, at Senlac Hill, where Harold was slain, 1066.

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Harold, Earl of Kent, 10, 250.

Haroun-al-Raschid, 10, 238.

Haroun-al-Rashid (CALIF OF BAGDAD).—(786–809 A. D.), now the capital of the Turkish province of Mesopotamia. He was styled Aaron the Just, which is the meaning of his name, for he was the most renowned of all the Abbasside dynasty, and in his day made Bagdad the center of civilization and learning, as well as a city of princely splendor. To youth, he is best known from the references to him in the tales of the "Arabian Nights," and all the wonderful things that happened in his reign. The halo that surrounds him, it has to be said, however, is more fabulous than real.

Harpagus, 10, 186.

Harper's Ferry, 11, 381.

Insurrection, 12, 19.

Harpies.—In Greek mythology, monsters having the head and body of a woman and the wings of a bird of prey. They were armed with sharp talons or claws with which they seized their victims. The number of Harpies has been variously described, but commonly it is given as either two or three.

Harraden, Beatrice, 8, 238.

Harrier dog, 4, 20.

Harris, Joel Chandler.—Born, 1848. An American author and journalist. Noted especially for his negro folk-lore work.

Harris, William T., Table of weights and heights of children, 2, 94.
on speech, 2, 117.

Harrisburg.—A city in Pa., on the Susquehanna River. It became the state capital in 1812 and is noted for its important manufacturing, especially of steel and iron. Pop. (1900), 50,167.

Harrisburg Convention.—The woolen high tariff bill of 1827 passed the House of Representatives, but was rejected in the Senate by the casting vote of the Vice-president. The protectionists thereupon called a convention to meet at Harrisburg, Pa., the following year. This body was made up mainly of delegates from the New England and Middle States. It presented to the people the idea of protection, and decided to ask for an increased duty on woolens and upon other manufactured articles. The activity of the delegates to this convention and the sentiment aroused, resulted in the passage of the high-tariff laws of 1828, which its enemies characterized as "The tariff of abominations."

Harrison, Benjamin, 12, 290.

Harrison, Carter H., 1, 245.
referred to, 12, 296.

Harrison, Mrs. Burton, 8, 240.

Harrison, Frederic.—Born in London in 1831. An English man of letters, a positivist in religion and a radical in English politics.

Harrison, William Henry, 11, 288.

Administration of, 12, 164.

Harrison's Landing.—On the lower James River in Va., often mentioned in the Civil War.

Harrod, Benjamin M., 12, 179.

Harrodsburg.—The oldest town in Ky., much resorted to for its mineral waters. Pop. (1900), 2,876.

"**Harry of the West**," 11, 299, 381.

Hart, Joel T., 9, 412.

Hart, John, 11, 100.

Hart, William.—(1823–1894.) Noted as a landscape and animal painter.

Harte, Francis Bret.—Born, 1839; an American humorist, novelist, and poet.

Hartford.—The capital of Conn., noted for its manufactures of firearms, bicycles, etc.; also for its educational and benevolent institutions. Of its early manufactures we have in the following an interesting record. General Washington, in 1789, visited a mill at Hartford, Conn., which made 5,000 yards of cloth and sold it at \$5.00 a yard. Washington wrote in his diary. "Their broadcloths are not of the first quality as yet, but they are good, as are their cassinets, cassinieres, serges, and everlasting; of the broadcloth I ordered a suit to be sent me at New York, and of their commoner goods a whole piece to make breeches for my servants." Pop. (1900), 79,850.

"**Hartford**," *The*, 11, 242.

Hartford Convention, 11, 241.

Hartshorn, 5, 154.

Hartsville (Tenn.), *Battle of*, 12, 19.

Hartz Mountain canary, 4, 169.

Harvard, Aid to poor students, 8, 47.

College founded, 11, 45.

Harvard, John, 14, 13.

Harvey, James, 11, 43.

Haseltine, Henry, 9, 412.

Haskins, Charles Waldo, on the Accountant, 13, 4.

Hassler Expedition.—An expedition of scientific research in the U. S. Coast Survey steamer "Hassler," commanded by P. C. Johnson. It started from Philadelphia and embraced the West Indies, Brazilian coast, Strait of Magellan, the Pacific coast and islands to San Francisco, Cal. The scientific part was under the direction of Prof. Agassiz, with a number of assistants.

Hastings, Battle of, 10, 251.
the sea-king, 10, 246.

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Hastings, Warren.—An English statesman, famous for his great services to England as an administrator in India, of which he was the first governor-general. For 35 years, from 1750 to 1785, he was in the East India Company's service, during 13 of which he had charge, first as governor of Bengal and latterly as governor-general, of the affairs of the Indian Empire. While practically master of India, he incurred the hostility of those who were instrumental in bringing charges against him, which were the bases of Burke's bitter invective in the impeachment of Hastings at the Bar of the House of Commons. These charges were chiefly of complicity with the then Indian Chief-justice in confiscating the treasure of the Begum of Oudh, and of taking foul means to get rid of an influential native dignitary obnoxious to both. From these charges Hastings was, however, acquitted. See Macaulay's essay, and Sir Alfred Lyall's monograph on Warren Hastings, in the "English Men of Action" series.

Hastings, Warren, 14, 100.

Hatcher's Run (Va.), Battle of, 12, 19.

Hats, Manufacture and Sale of, by A. L. Belden, 13, 396.

Hats and Head-Gear.—The felt hat is as old as Homer. The Greeks made them in skull-caps, conical, truncated, narrow, or broad-brimmed. The Phrygian bonnet was an elevated cap without a brim, the apex turned over in front. It is known as the "cap of liberty." An ancient figure of Liberty in the times of Antonius Livius, A. D. 115, holds the cap in the right hand. The Persians wore soft caps; plumed hats were the head-dress of the Syrian corps of Xerxes; the broad-brim was worn by the Macedonian kings. Castor means a beaver. The Armenian captive wore a plug hat. The merchants of the fourteenth century wore a Flanders beaver. Charles VII., in 1469, wore a felt hat lined with red, and plumed. The English men and women in 1510 wore close woolen or knitted caps; two centuries ago hats were worn in the house. Pepys, in his diary, wrote: "September, 1664, got a severe cold because he took off his hat at dinner;" and again, in January, 1665, he got another cold by sitting too long with his head bare, to allow his wife's maid to comb his hair and wash his ears; and Lord Clarendon, in his essay, speaking of the decay of respect due the aged, says "that in his younger days he never kept his hat on before those older than himself, except at dinner." In the thirteenth century Pope Innocent IV. allowed the cardinals the use of the scarlet cloth hat. The hats now

in use are the cloth hat, leather hat, paper hat, silk hat, opera hat, spring-brim hat, and straw hat.

Hatteras, Cape.—A sandy point projecting into the Atlantic, on the coast of N. C., noted for the violent storms that occur in its vicinity.

Hatteras (N. C.), Expedition, 12, 19.

Hau Chi, 10, 36.

Hauck, Minnie.—Born at New York, 1852. A noted American singer.

Havelock, Sir Henry.—A British general, one of the heroes of the Indian Mutiny (1857), was born in 1795, and died at Lucknow, India, in 1857. He entered the army in 1815, and in India, whither he went in 1823, he served in the Afghan and Sikh wars, and also in Persia. Throughout his military career he manifested the traits and bore the character of a Christian soldier. At the outbreak of the Indian Mutiny, he was sent to the relief of Cawnpore and Lucknow. After a forced march, with a small column of troops, he moved upon Cawnpore, where Nana Sahib and his Sepoy mutineers had put all the Europeans, including many women and children, to death. After many conflicts with the Sepoy assassins, and aided by reinforcements under General Outram, Havelock pushed on to the relief of Lucknow, which he reached in Sept. (1857). There, being himself beleaguered, he intrenched himself with his handful of heroes in the Residency, which he defended until November, when he was rescued by the relieving column under Sir Colin Campbell (afterward Lord Clyde). Havelock's health, meanwhile, had been so undermined by his anxieties and privations that he fell a victim to dysentery and died Nov. 24, 1857. To his son was afterward given a baronetcy, and to his widow a considerable pension.

Havelock, Sir Henry, 14, 37.

at Lucknow, 11, 16.

Haverhill.—A city in Mass., situated on the Merrimac River; the birthplace of Whittier; noted for its shoe manufactures. Pop. (1900), 37,175.

Haviland, John.—(1793–1852.) A noted Anglo-American architect.

Havre, Le, or Havre (formerly HAVRE-DE-GRÂCE).—A seaport of France, situated at the mouth of the Seine.

Hawaii, or Sandwich Islands.—Annexed by the United States in July, 1898, consists of 8 inhabited and 4 uninhabited islands in the North Pacific, 2,100 miles west of San Francisco, and about 3,400 miles east of Japan. The area of the entire group is about 6,500 square miles,

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with an estimated population of 154,000, chiefly natives of the Polynesian race. The largest of the islands is Hawaii, but the capital (Honolulu) is on the island of Oahu. The products are sugar, rice, taro, coffee, bananas, and pineapples. There is a growing live-stock industry and a considerable exportation of wool. The value of the exports to the United States was in 1900, over 20 million dollars, with imports of 13½ million dollars. In the larger islands, which are of volcanic origin, there are over 100 miles of railroad, and the capital operates lines of electric railway and tramways. There are also several good banks, and there has been fair educational progress of recent years. Under the governor, Sanford B. Dole, there is a territorial legislature, chiefly of Republicans and independents, with a delegate representative to Congress. The climate is mild and equable; the mean annual temperature on the coast is 68° on the windward and 80° on the leeward side of the islands. The islands are connected both east and west by submarine cables. The chief are Hawaii, Maui, Oahu, Kauai, Lanai, Kahulaui, Molokai, and Niihau. They were first discovered by Gaetano in 1542, and were again discovered in 1778, by Capt. Cook, who, in Feb., 1779 was killed by the natives. The inhabitants are about one-fourth Hawaiians, the remainder being Chinese, Japanese, and Portuguese, with a few Americans, English, and Germans. The government was formerly a monarchy, with a king, cabinet, and legislature. After the death of King Kalakaua, in 1891, Queen Liliuokalani came to the throne. She was deposed by a committee of safety, Jan. 17, 1893, and a provisional government was formed, headed by Sanford B. Dole. A treaty of annexation to the U. S. was then concluded and sent to the Senate by President Benjamin Harrison, and was pending when President Cleveland was inaugurated. He promptly withdrew it. The restoration of the queen was attempted, but the scheme failed. July 4, 1894, a republic was proclaimed with Mr. Dole as president. After President McKinley's accession another treaty of annexation was sent to the Senate. Pending its consideration, a joint resolution passed Congress annexing the islands. It was approved July 7, 1898.

Haweis, Rev. H. R., 31, Devonshire St., London, (1838-), has been for 34 years incumbent of St. James's, Marylebone; the most versatile of clergymen; a musician, lecturer, traveler, journalist, and voluminous author; a broad churchman, who does not scorn to make his services entertaining.

Hawk, 4, 138.

Cooper's, 4, 140.

Fish, 4, 141.

Marsh, 4, 140.

Nighthawk, 4, 140.

Owl, 4, 143.

Red-tailed, 4, 140.

Sharp-shinned, 4, 140.

Sparrow, 4, 141.

Hawkeye State.—Iowa; so-called, it is said, from an Indian chief who once lived in that part of the country.

Hawking in old England, 4, 139.

Hawkins, Anthony Hope, Savoy Mansions, London, (1863-); a novelist who has set two literary fashions. (1) by "The Prisoner of Zenda," (2) by "The Dolly Dialogues"; is a student, a subtle delineator of character, and an earnest politician, who would like to be in Parliament.

Hawley, Joseph.—(1723-1788.) An American patriot.

Hawley, Joseph Roswell.—Born at Stewartsville, N. C., 1826; distinguished as an American general, journalist, and politician.

Hawthorn, 4, 436.

English, 4, 421.

Scarlet haw, 4, 421.

Hawthorne, Julian.—Born at Boston, 1846, son of Nathaniel Hawthorne, noted as a novelist and miscellaneous writer.

Hawthorne, Nathaniel, 8, 340.

a master of style, 8, 370.

mode of working, 8, 265.

Hay, John, 12, 296.

Death of, 12, 183.

Services during outbreak in China, 11, 32.

Work of, 12, 183.

Hay, Production of, 5, 81.

Hayden, F. V., 12, 274.

Hayden, Mount, or **Grand Teton**.—The highest peak of the Teton Range, Wyo. Height, 13,600 ft.

Haydn, Franz Joseph, 9, 111.

Haydon, Benjamin, 9, 281.

Haydon, Benjamin Robert.—(1786-1846.) An English historical painter.

Hayes, Isaac Israel, 11, 381.

Hayes, Rutherford Birchard, 12, 297.

Election of, 12, 159.

Tilden contest, 12, 211, 257.

Vetoed Bland silver bill, 13, 156.

Haymarket Riot, 12, 300.

Hayne, Paul Hamilton.—(1831-1886.) An American poet.

Hayne, 14, 352.

Hazardville.—A village in Conn., noted for its powder manufacture.

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- Hazen, William Babcock**, 12, 20.
- Hazlitt, William.**—(1778-1830.) An English essayist and critic.
- Headley, Joel Tyler.**—Born at Walton, N. Y., 1813; died at Newburg, N. Y., 1897. He was the author of numerous historical and biographical works, which include "Napoleon and His Marshals," "Life of Washington," etc.
- Headley, Phineas Camp.**—Born at Walton, N. Y., 1819. A clergyman and writer on biographical subjects. Brother of Joel Tyler Headley. He wrote "The Court and Camp of David," etc.
- Heal-all**, 5, 26.
- Healey, George Peter Alexander.**—Born in 1818; died, 1894; noted as a portrait-painter.
- Health**, 6, 7.
 Bill of, 13, 38.
 National Board of, 12, 338.
- Health of children**, 7, 7.
 not to be worried over, 2, 96.
- Hearing**, Defects of, 2, 99.
 Helps to, 2, 98.
- Heart**, 1, 280.
 Beating of the, 1, 282.
 Valves of the, 1, 281.
 Work done by the, 1, 283.
- Heat**, 5, 264.
 Animal, 5, 274.
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 Boiling, 5, 270.
 Conduction of, 5, 271.
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 Effects of, 5, 267.
 Electricity a source of, 5, 267.
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 Fire a source of, 5, 266.
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 Measuring, 5, 268.
 Nature of, 5, 264.
 prostration, Aid in, 1, 356.
 Radiation of, 5, 271.
 Red, 5, 274.
 Sources of, 5, 265.
 Specific, 5, 274.
 Transmission of, 5, 271.
 White, 5, 274.
- Heath, William**, 11, 100.
- Heath family**, 5, 10.
 hen, 4, 123.
- Heatherton, J. Madison**, on "Plumbing," 13, 421.
- Hebe**, 10, 87.
- Heber, Reginald.**—(1783-1826.) An English bishop and hymn-writer.
- Hébert, Jacques René.**—(1755-1794.) A French revolutionist. He took an active part in the work of the Revolution chiefly by his pen. He instituted the worship of the Goddess of Reason. He was the chief witness against Marie Antoinette. He was sent to the guillotine by Robespierre.
- Hebrews, History of**, 10, 183.
- Hebrides.**—A collective name given to all the islands off the west coast of Scotland. They are divided into the Inner and the Outer Hebrides. About 120 of the islands are inhabited, and the total population is about 100,000.
- Hebron.**—One of the oldest existing biblical cities, is situated among the mountains of Judah, in Palestine, about 21 miles south of Jerusalem. The modern town is in a poor condition, and the pop. is about 5,000.
- Hecate.**—A Grecian goddess, who practised and taught sorcery and witchcraft.
- Hecatomb**, means literally the sacrifice of 100 victims in the religious rites practised among the ancient Greeks.
- Hecatomb**, 4, 16.
- Hecker, Isaac Thomas.**—Born at New York, 1819; died there, 1888, a Roman Catholic ecclesiastic. At one time he was a member of the Brook Farm community. In 1849 he was ordained a priest and founded the order of the Paulists in 1858, of which he became the superior. He was also the founder of the "Catholic Times."
- Heckewelder, John Gottlieb Ernest.**—Born in England, 1743; died at Bethlehem, Pa., 1823. Noted as a Moravian missionary among the Indians.
- Hecla, Mt.**—A conical-shaped volcanic mountain in Iceland, 20 miles from the southern coast. (Height, 5,110 ft.)
- Heclare**, 13, 153.
- Hectogram**, 13, 153.
- Hectoliter**, 13, 153.
- Hectometer**, 13, 153.
- Hector**, Trojan hero, 3, 369.
- Hector, Mrs. (ANNIE FRENCH).**—Born, 1825. Pseudonym of Mrs. Alexander. A British novelist.
- Hecuba.**—The second wife of Priam, King of Troy. Was led into slavery after the fall of Troy, and saw her children put to death. She took vengeance upon Polymestor, who slew her son, by slaying his children and tearing out his eyes.
- Hedera helix**, 4, 478.
 Nigra, 4, 478.
- Hedge mustard**, 5, 60.
- Hedgehog**, 4, 70.
 European, 4, 70.

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Hedgehog—*Continued.*

Food of the, 4, 70.

Habits of the, 4, 71.

Home of the, 4, 70.

Heen-fung, 10, 161.

Hegel (*hā'gel*), **Georg Wilhelm Friedrich**.—(1770-1831.) An eminent German philosopher.

Hegira, 13, 102

Flight of Mohammed, 3, 388.

Heidelberg.—A city on the Neckar River, in the grand duchy of Baden, Germany, 13 miles southeast of Mannheim. The ruins of its famous castle, for 500 years the home of the electors Palatine, are on the hill behind the town; the city has some interesting historic buildings, churches, etc.; but it is especially noted for its university, founded in 1386, where many of the scholars and literati of Germany have been educated. It has a teaching staff of 150, and a student attendance of 1,550; its library contains about 400,000 volumes, and 2,000 rare manuscripts. Population, 40,000.

Height, Method of measuring, 13, 163.

of children, Table of, 2, 94.

Heimdal, 10, 126.

Heine (*hi'ne*), **Heinrich**.—(1799-1856.) An eminent German critic and lyric poet, of Hebrew descent.

Helderberg War, 11, 382.

Helena.—(1) The capital of Mont., an important business center with gold mines in its vicinity. Pop. (1900), 10,770. (2) A city in Ark., on the Mississippi River. The scene of an unsuccessful attack by the Confederates (1863). Pop. (1900), 5,550.

Helena (Ark.), **Battle of**, 12, 20.

Helena, St.—A lonely island in the Atlantic Ocean. It is 10½ miles long and 7 miles wide; pop. (1901), 3,342. Napoleon Bonaparte lived here in captivity from 1815 till 1821.

Helen of Troy, 3, 367; 10, 392.

Helianthus, 5, 76.

Helicon.—The abode of the Muses. A mountain range in Bœotia, Greece. Height, 5,736 feet.

Heligoland—An island in the North Sea opposite the mouth of the Elbe. Its length is a little more than a mile, and its population is 2,086. It was taken from Denmark by Great Britain in 1807 and ceded by it to Germany in 1890.

Heligoland, 10, 360.

Heliography, or sun-writing, is the reflection of a beam of sunlight in a definite direction so that it can be seen by one located in that direction. It is usually accomplished by silvered

plate-glass mirrors. By intermittent flashes of light the dots and dashes of Morse's telegraphic code may be indicated. The apparatus used is effective even to a distance of 100 miles. The system is of the greatest service in military and geodetic operations.

Heliopolis.—An ancient city in Egypt on a branch of the Nile, near the apex of the Delta.

Heliotrope.—A genus of plants belonging to the order Boraginaceæ, often bearing fragrant flowers. That usually cultivated is the Peruvian heliotrope. They thrive well in rich, light soil and are most usually propagated by cuttings.

Heliotrope, 5, 60.

Helix, 7, 285.

Hellas.—Originally a small district and town in ancient Thessaly. Later it was the name applied in a general way to all of Greece as being the home of the Hellenes.

Hellas, 10, 189.

Hellenes, 10, 189.

Heller, Stephen.—(1814-1888.) A distinguished Hungarian composer and pianist.

Hellespont.—The ancient name of the Dardanelles.

Hell Gate.—A dangerous passage in the East River near New York City. Obstructions were removed by explosions at Hallett's Point in 1876 and at Flood Rock in 1885.

Helmholtz, Hermann von.—An eminent German physicist, and ex-professor of physics at the University of Berlin, born in 1821, and died in 1894. To physiology he made in his day many important contributions on the various sense-organs, and to physics he also contributed much, especially on the conservation of energy. His most original work was, however, done in connection with acoustics in its relation to optics; and for these services to science he was ennobled. In 1851, he invented the ophthalmoscope. His published writings include a work on the "Theory of Sound Sensations," a "Manual of Physiological Optics," a treatise entitled, "Sensations of Tone as a Physiological Basis for the Theory of Music," and a work "On the Conservation of Force."

Helmuth, William Tod.—A homeopathic physician and writer of New York; born in Philadelphia, 1833.

Héloise (*ā-lō-ēs'*).—(1101-1164.) A French abbess celebrated for her romantic relations with Abelard.

Helots.—The lowest class of serfs and slaves in ancient Sparta. They served in war as light-armed troops. They were the descendants of prisoners of war, and were often cruelly

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treated. Large numbers were massacred to keep down revolts.

Helots 10, 190.

Helvetii.—A tribe of Celts or Gauls who lived in modern Switzerland, around Lake Geneva and along the upper courses of the Rhine. They were conquered by Cæsar.

Hemans, Mrs. (FELICIA DOROTHEA BROWNE). (1793-1835.) An English lyric poet.

Hematite, Brown, 5, 436.
Red, 5, 436.

Hemesa, Battle of, 10, 401.

Hemiptera.—“Half-winged” insects. An order having four wings, the first pair of which are membranous and without scales. They include water-bugs, boat-flies, and water-scorpions.

Hemiptera, 4, 358.

Hemlock.—A genus of plants which belong to the order Umbelliferae. The common roadside hemlock (*Conium maculatum*) has a root resembling a parsnip; the stem is from 2 to 7 feet high, usually purple-spotted, and the leaves are large of a dark shining green color. The plant is poisonous. The Greeks compelled criminals to drink a decoction made from the plant, and it was thus Socrates died.

Hemlock, 5, 2.
tea, 5, 2.

Hemorrhage, First aid in, 1, 358.

Hemp, 5, 85.
Cultivation of, 5, 85.

Hempel, Charles Julius.—Born in Prussia, 1811; died at Grand Rapids, Mich., 1879. A noted German-American physician. He emigrated to America in 1835, and after graduating at the University of New York in 1845, was appointed professor of materia medica and therapeutics in the Hahnemann Medical College, at Philadelphia, in 1857. He subsequently removed to Grand Rapids, Mich., where he practiced his profession. He was the author of a “System of Materia Medica and Therapeutics,” etc.

Henbane (*Hyoscyamus*).—A genus of plants belonging to the order Solanaceae. The plant contains an alkaloid, *Hyoscyamine*, which is of medicinal value and is an active poison. When dropped into the eye the effect is the same as that of belladonna; it dilates the pupil.

Henbane, 5, 60.

Henderson, David Bremmer, 12, 301.

Henderson, James Pinckney, 11, 382.

Henderson, John, 14, 269.

Hendricks, Thomas Andrew, 12, 301.

Hengist and Horsa.—Two Saxon brothers who, with a body of Jutes landed in Kent, England,

about the year 450 A. D., to assist, as the tradition goes, Vortigern, an early British prince, to repel from Southern England incursions of the northern Picts. They were rewarded with the gift of the island of Thanet. It is said, however, that Hengist and Horsa, Vortigern and Rowena, and Arthur and Modred, are all mythical heroes and heroines, whose existence historically may be questioned. There is reason, nevertheless, for believing that they were real personages, and that the accounts that have come down to our day of the adventurers said to have taken part in the early conquest of Britain are based upon historical facts, blended, no doubt, however, and in some degree, with romance.

Hengist and Horsa, 10, 236.

Henley-on-Thames.—A town on the Thames in Oxfordshire, 36 miles from London, noted for its regattas. Pop., 4,913.

Hennepin, Louis, 11, 58.

Henrici, Jakob.—Born in Bavaria, 1803; died at Economy, Pa., 1892. A German-American communist. On his arrival in America in 1823, he became a member of the Harmonist Society founded by George Rapp first at Harmony, and then removed to Economy, Pa. He was appointed manager of the Community on Rapp's death in 1868, a position he retained during his lifetime.

Henry I.—(1068-1135.) King of England (1106-35), 10, 261.

Henry II.—(1133-1189.) King of England (1154-89), 10, 261.

Henry III.—(1207-1272.) King of England (1216-72), 10, 262.

Henry IV.—(1367-1413.) King of England (1399-1413).

Henry V.—(1387-1422.) King of England (1413-22).

Henry VI.—(1421-1471.) King of England (1422-71), 10, 274.

Henry VII.—(1457-1509.) King of England (1485-1509), 10, 274.

Henry VIII.—(1491-1547.) King of England (1509-47), 10, 300, 436.

Henry I.—(1011-1060.) King of France (1031-60).

Henry II.—(1519-1559.) King of France (1547-59), 10, 294.

Henry III.—(1551-1589.) King of France (1574-89), 10, 296.

Henry IV. of Navarre, 10, 294.

Henry I., “the Fowler.”—(876-936.) King of Germany (919-36), 10, 242.

Henry II.—(972-1024.) Emperor of the Holy Roman Empire,

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- Henry III.**, "The Black."—(1017-1056.) Emperor of the Holy Roman Empire (1046-56), 10, 243.
- Henry IV.**—(1050-1106.) Emperor of the Holy Roman Empire (1084-1106), 10, 260.
- Henry V.**—(1081-1125.) Emperor of the Holy Roman Empire (1111-25).
- Henry VI.**—(1165-1197.) Emperor of the Holy Roman Empire (1191-97).
- Henry VII.**—(1262-1313.) Emperor of the Holy Roman Empire (1312-13).
- Henry the Navigator of Portugal**, 10, 286.
- Henry, Arthur**, quoted on backward children, 2, 442.
- Henry, Joseph.**—A notable American physicist and experimenter in electrical science, was born in 1797 and died in 1878. For over 30 years he administered the affairs of the Smithsonian Institution at Washington, D. C., and he may be said to have anticipated Faraday in some of his electrical demonstrations. To Henry at least is due the important discovery of self-induction, besides other extensions as well as verifications of Faraday's observations in the phenomena of electro-magnetism. Henry was of much service to the great electrician, Morse, in making use of the principle of the Henry electro-magnet and in utilizing the armature as a recording instrument. He has left a collection of important papers, and a work entitled "Contributions to Electricity and Magnetism."
- Henry, Patrick**, 11, 101; 14, 14.
- "**Henry Esmond.**"—The title of Thackeray's great historical novel, written in 1852.
- Henry Tudor**, Earl of Richmond, 10, 274.
- Hens**, Origin of, 4, 105.
- Hens and the Eagles**, Turkish fable, 3, 182.
- Hensel, Madame** (FANNY CECILE MENDELSSOHN-BARTHOLDY).—(1805-1847.) A pianist and composer, elder sister of Felix Mendelssohn.
- Hensel, Wilhelm.**—(1794-1861.) A German historical painter. He married Fanny Mendelssohn (1829).
- Henshaw, John Prentiss Kewley.**—Born at Middletown, Conn., 1792; died near Frederick, Md., 1852. A bishop of the Protestant Episcopal Church in America. He was appointed bishop of R. I. and rector of Grace Church, Providence, in 1843. He wrote a number of theological works, also "Hymns," etc.
- Henty, George Alfred.**—Born, 1832. An English novelist, best known as a writer of books for boys.
- Hentz, Mrs.** (CAROLINE LEE WHITING).—Born at Lancaster, Mass., 1800; died at Marianna, Fla., 1856, noted as a novelist. She was the author of "Aunt Patty's Scrap-Bag," "The Mob-Cap," etc.
- Hepburn, James.**—Fourth Earl of Bothwell and husband of Mary Queen of Scots. (1536-1578.)
- Hepburn versus Griswold**, 12, 301.
- Hephæstus**, 10, 96.
- Heptagon.**—A seven-sided and seven-angled plane figure. When all the sides and angles are equal the figure is a regular heptagon. It has proved an impossible problem to inscribe or to circumscribe a heptagon in or about a circle.
- Heptarchy.**—A name used to indicate the form of government of the early English kingdoms prior to 827, when Egbert became king of all England. The states included Kent, Mercia, Wessex, East Anglia, Northumbria (Bernicia and Deira), and Sussex.
- Hepworth, George Hughes.**—Born at Boston, Mass., 1833. A clergyman and literary writer. At first a member of the Unitarian Church, he became a Presbyterian and eventually accepted an appointment on the New York "Herald." He wrote "The Whip, Hoe, and Sword," "The Criminal, the Crime, the Penalty," etc.
- Hera.**—The Greek divinity corresponding to the Roman Juno, goddess of heaven, sister and wife of Zeus or Jupiter.
- Hera**, 10, 88.
- Heraclea, Battle of**, 10, 207.
- Herat.**—A city in Afghanistan of such strategic importance as to be regarded as the "Key of India." It has sustained more than 50 sieges. Population, about 30,000.
- Herbarium**, Making a practical, 4, 401.
- Herbert, George.**—(1593-1633.) An English poet.
- Herbert, George**, 14, 189.
- Herbert, Henry William** (FRANK FORESTER).—(1807-1858.) An author of miscellaneous writings, novels, translations, etc.
- Herbertists**, 10, 345.
- Herb Robert, The**, 5, 18.
- Herculaneum.**—An ancient city of Italy, 6 miles from Naples, which with Pompeii was buried in 79 A. D. by an eruption of Mt. Vesuvius. Recent excavations have brought to light most interesting remains.
- Hercules**, a constellation, 5, 146.
a German fable, 3, 194.
Labors of, 10, 105.
referred to, 14, 22.
- Hercules, Pillars of.**—The ancient name of the two rocks at the entrance from the Atlantic into the Mediterranean Sea. That on the north is Gibraltar and that on the south is Ceuta.
- Hercules' Club**, 4, 477.

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Heredity.—A tendency, manifested by an organism (whether it be that of man or animal) to develop in the likeness of its progenitor and transmit that progenitor's qualities. Strictly speaking, it is the transmission of physical and mental characteristics from parent to offspring—but how the law acts is not known, nor do we know the actual seat of the transmitting power or tendency. Its operation in the structure and through the potentialities of the brain, or physical frame of man, would indicate that the principle or acting-power is imbedded in the species, either in the cell structures or in some mode of action through them, so that its effects reproduce themselves as if by some inexorable law.

Heredity, 2, 392, 393.

Ignorance about, 2, 57.

Modern views of, 2, 377.

Weissman quoted on, 2, 16.

Hereford Cattle, 4, 16.

Herkimer, Nicholas, 11, 106.

Herman, Augustine, 11, 53.

Hermes, 10, 97.

Statue of, 9, 363.

Hermes Trismegistus, quoted on imagination, 2, 182.

Hermitage, 12, 301.

Hermit-crab, 4, 367.

Hermit of the Sands, 4, 323.

Hermit thrush, 4, 162.

Herndon, William Lewis, 11, 382.

Hero.—A mathematician of the 3d century B. C. who lived at Alexandria. He was the inventor of "Hero's fountain," a piece of physical apparatus to demonstrate the pressure and elasticity of air.

Herod I.—"The Great," King of Judea 40-4 B. C.

Herodines, a class of birds, 4, 103.

Herodotus.—An early Greek historian, styled "the Father of History," who lived between the years 484 and 424 B. C. He was a man of much learning and well acquainted, by travel, with all of the historic parts of Greece and with Egypt and Palestine. His history, which was in nine books, named after the nine Muses, recites a delightful narrative of the Persian invasion of Greece down to the year 479 B. C. It is full of interesting episodes, the work of an intelligent and shrewd observer, and is known to be honest and faithful in the historic facts the author relates. See Rawlinson's translation of Herodotus.

Heroic age, 10, 189.

Heron, 4, 223.

Black-crowned night, 4, 224.

Great blue, 4, 223.

Heron—Continued.

Green, 4, 225.

Snowy, 4, 224.

Heron, of Alexandria, on the steam-engine, 5, 276.

Heron, Matilda.—Born in Ireland, 1830, died at New York, 1877. A noted Irish-American actress. When quite young she made her début at Philadelphia (1851) as "Bianca" in "Fazio." She was married to Robert Stœpel, a musician, in 1857 and divorced in 1869. She has one daughter, Bijou, also an actress, born at New York, 1863.

Her Own Way, a story, 2, 369.

Herrick, Robert.—(1591-1674.) An English lyric poet.

Herring, John Frederick.—(1795-1865.) An English painter of horses.

Herring, 4, 292.

Catching, 4, 292.

Characteristics of the, 4, 292.

Common, 4, 292.

Fishing, 4, 292.

Food of the, 4, 292.

Varieties of the, 4, 292.

Herring Gull, 4, 217.

Herschel, Sir William.—A distinguished English astronomer (born, 1738, died, 1822), the discoverer of the planet Uranus and two of its satellites, also the discoverer of two of the satellites of Saturn. In 1789, he erected at Slough, near Windsor, a great reflecting telescope of over 39 feet focal length, which largely aided him in his discoveries, afterward communicated to the Royal Society. In 1782 he was appointed astronomer to the English court. "In nearly every branch of modern physical astronomy he was a pioneer—the virtual founder of sidereal science. As an explorer of the heavens he had but one rival—his son." The latter, known as SIR JOHN F. W. HERSCHEL (b. 1792, d. 1871), did much in England also to advance astronomical science, continuing his illustrious father's work and researches. In 1834, he proceeded with his instruments and a reflecting telescope, which he designed and constructed, to the Cape of Good Hope, where he made many important observations of the heavens, the results of which he afterward published, together with an "Outline of Astronomy," "Familiar Letters on Scientific Subjects," and a work on the "Study of Natural Philosophy."

Herschel, Sir William, 14, 96.

Hertz, Henrik.—(1798-1870.) A Danish poet and dramatist.

Herzegovina.—A district of Europe the government of which is administered by Austria-

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- Hungary. It touches Bosnia, Montenegro, and Dalmatia.
- Herzegovina, Revolt of**, 11, 11.
- Heshvan**, 13, 102.
- Hesiod.**—A celebrated Greek poet who lived about 735 B. C.
- Hesperides, The.**—In Greek mythology, maidens, the daughters of Night, according to Hesiod, who guarded the golden apples which Gæe (Earth) caused to grow as a marriage gift for Hera, Queen of Heaven, who was to marry Zeus (Jupiter). They are usually spoken of as three in number, and their abode was an island of the ocean on the western edge of the world. They were gifted with the faculty of song. The apples were stolen by Hercules and given by him first to Eurystheus and afterward to Athene (Minerva) by whom they were restored to the garden of the Hesperides.
- Hesperus.**—In Greek mythology, the deified evening star.
- Hess, Anton**, 9, 404.
- Hess, Peter von.**—(1792-1871.) A celebrated German painter of genre and battle scenes.
- Hessian Fly** (*Cecidomyia destructor*).—An insect, the larva of which has proved extremely destructive to wheat in America. It is of a black color; the wings are dusky, darker near the body; the legs are pale brown; the feet, black; and the antennæ are hairy.
- Hessian Fly**, 4, 350.
- Hessians**, 11, 106.
- Hestia**, 10, 99.
- Hewitt, Abram Stevens**, 12, 302.
on a college education, 8, 142.
- Hewitt, John Hill.**—Born at New York, 1801; died at Baltimore, Md., 1890. A writer, noted as the author of the ballad "The Minstrel's Return from the War," etc.
- Hewitt, Peter Cooper**, 5, 323.
- Hexagon.**—A six-sided and six-angled plane figure. When all the sides and angles are equal the figure is called a regular hexagon.
- Hexagon**, 7, 283.
To construct a, 7, 240.
- Hexagonal star**, To construct a, 7, 240.
- Hexameter.**—A line in poetry composed of six feet. Such is the measure used by Virgil in the "Æneid."
- Hexandrous.**—A botanical term used to indicate that a plant has six stamens.
- Hexham, Battle of**, 10, 274.
- Heywood, Thomas.**—A celebrated English dramatist and miscellaneous writer who lived in the middle of the 17th century.
- H. H.**—Pseudonym of Mrs. Jackson, later Mrs. Hunt.
- Hibernia.**—The name given to Ireland by ancient writers.
- Hiccough, Treatment of**, 1, 331.
- Hickey Plot**, 11, 106.
- Hickory**, 4, 425.
Brown, 4, 450.
Shad, 4, 308.
Small-fruited, 4, 449.
Swamp, 4, 447.
tree, 4, 447.
White, 4, 448.
- "**Hickory, Old**," 12, 20.
- Hickory Pole Canvass.**—The so-called presidential canvass of 1828, in behalf of Jackson.
- Hickory Tree, The**, 4, 447.
- Hicks, painter**, 9, 331.
- Hicks, General**, defeated in the Sudan.
- Hicks, General**, 11, 18.
- Hicks-Beach, Sir Michael Edward.**—Born, 1837. An English baronet and Conservative politician.
- Hicoria alba**, 4, 448.
glabra, 4, 450.
laciniosa, 4, 449.
microcarpa, 4, 449.
minima, 4, 447.
Ovata, 4, 449.
pecan, 4, 425.
- Hidalgo de Cisneros y Latorre, Baltazar.**—(1755-1829.) A Spanish general and administrator.
- Hierapolis.**—(1) An ancient city of Phrygia, Asia Minor; the modern Pambuk Kalessi. (2) An ancient city of Syria.
- Hierocles**, "Facetiae" of, 2, 174.
- Hieroglyphics**, 10, 179.
- Higginson, Thomas Wentworth.**—Born at Cambridge, Mass., 1823. An American author; a noted opponent of slavery. He relinquished the ministry in 1858 and became colonel of the first colored regiment in the Civil War.
- Higginson, Thomas Wentworth**, on the secret of success, 8, 118.
- High-bridge.**—Built in 1840 at 175th St. in New York City. It carries the Croton aqueduct across the Harlem River into the city. Its length is 1,460 ft. and has 13 granite arches each of which is 116 ft. high.
- Highlands of the Hudson.**—A series of hills and small mountains in eastern N. Y., among which Fishkill Mountain, Storm King, Crow's Nest, Anthony's Nose, and West Point are the most prominent.
- High License**, 12, 302.
Seas, 12, 302.
- "**High-water Mark of the Rebellion**," 12, 20.
- Higley, John**, 13, 162.
- Hildebrand, Pope**, 10, 243.

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- Hildesheim, Bishop of**, 9, 390.
- Hill, Daniel Harvey** 12, 20.
- Hill, David Bennet**, 12, 302.
- Hill, James J.**, on Railroading, 5, 402.
on City and Country, 8, 106.
- Hill, Sir Rowland**.—(1795-1879.) The author of the penny postal system in England.
- Hill, Sir Rowland**, 10, 381.
- Hiller, Ferdinand**.—(1811-1885.) A distinguished German composer, pianist, and writer on music.
- Hiller, Johann Adam**.—(1728-1804.) A German composer; founder of what are now known as the Gewandhaus concerts.
- Hilliard, Henry Washington**.—(1808-1892.) American general and statesman; member of Congress from Ala. (1845-51), and was appointed by Jefferson Davis as Confederate commissioner to Tenn.; brig.-gen. in the Confederate army; U. S. minister to Brazil (1877-81).
- Hilliard, Nicholas**, 9, 274.
- Hills, W. J.**, on "Educational Value of Physical Training, 6, 17.
- Himalayas** (meaning "snow-abodes").—A range of mountains in south-central Asia that bounds the peninsula of India on the north, from Afghanistan to Burma, separating it from Tibet. In the range there are over forty peaks known to be higher than any in the rest of the world, their average elevation being from 16,000 to 18,000 feet. Mount Everest in Nepal reaches a height of 29,000 feet above the sea. The limit of perpetual snow varies on north and south, the average being about 17,000 feet. In the Himalayas rise the Ganges, Jumna, Sutlej, Indus, and Brahmaputra rivers. The highest of the passes across the range is the Parang Pass, at a height of 18,500 feet; even at this high elevation, or near to it, are to be found monasteries, permanently inhabited, while cities are met with at an elevation of 12,000 feet.
- Hindoo elemental gods**, 10, 31.
fables, 3, 167.
fairy tales, 3, 17.
gods, Great number of, 10, 3.
idea of eternity, 10, 7.
Mythology, 10, 3.
pantheon, 10, 3.
religion, 10, 3.
Sacta, 10, 3.
trinity, 10, 3.
version of the flood, 10, 9.
- Hindoos, Golden age of**, 10, 12.
- Hindustan, or Hindustan** ("the land of the Hindus").—A term applied sometimes to the whole of India, but more properly restricted to the region bounded by Bengal on the east and the Punjab on the west, that is the extensive plain which lies between the Himalayas on the north and the Vindhya Mountains on the south. Here, in the upper valley of the Ganges, was the center of Mohammedan rule and the early home of the Sanskrit-speaking peoples. It now embraces the British N. W. provinces of Oudh and Behar, the seat of the cities Benares, Lucknow, Simla, Agra, Delhi, and Lahore. (See INDIA.)
- Hindu Kush**.—A western continuation of the Himalaya Mountains, lying for the most part in Afghanistan and Kafiristan. The highest point is about 24,000 feet.
- Hinges**, 7, 186.
- Hipparchus**, 10, 194.
- Hippias**, 10, 194.
- Hippocampus**, 4, 282.
- Hippocrates**.—Born about 460 B. C.; died about 377. A celebrated Greek physician.
- Hippolyte**.—A mythological queen of the Amazons.
- Hippolyte**, 10, 110.
Queen of the Amazons, 10, 107.
- Hippomenes**, 10, 112.
- Hippopotamus**, 4, 82.
Characteristics of the, 4, 82.
Flesh of the, 4, 82.
Habits of the, 4, 82.
Home of the, 4, 82.
Skin of the, 4, 83.
- Hiram of Tyre**, 10, 183.
- Hiranyakasipu**, 10, 11.
- Hirsch, Baron Maurice de** (Baron MAURICE DE HIRSCH DE GEREUTH).—(1831-1896.) An Austrian financier, capitalist, and philanthropist.
- Histology, Vegetable**, 4, 391.
- History of the Plymouth Plantation**, 11, 44.
Women who have influenced, 10, 391.
- Hitchcock, Ethan Allen**, 12, 302.
- Hitopadesa**, Hindu collection of fables, 3, 169.
- Hittites**, 10, 180.
- Hives, Treatment of**, 1, 337.
- Hoar, Ebenezer Rockwood**, 12, 303.
- Hoar, George F.**, quoted on the Cod, 4, 285.
Life of, 12, 303.
- Hobart, Garrett Augustus**, 12, 303.
- Hobbema, Meindert**, 9, 313.
- Hobbes, John Oliver**.—The pseudonym of Mrs. Craigie, an English novelist.
- Hobbes, Thomas**.—(1588-1679.) A celebrated English philosopher.
- Hobkirk's Hill** (S. C.), Battle of, 11, 106.
- Hoboken**.—A city in N. J. on the Hudson River. It is the seat of the Stevens Institute of Tech-

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- nology, and the terminus of several steamship and railway lines. Pop. (1900), 59,364.
- Hobson, Richard Pearson**, 12, 303.
- Hobson's Choice**.—Tobias Hobson, the first carrier of Cambridge University, England, and keeper of a livery-stable, always obliged his patrons to take the horse nearest the door of the stable. The expression (Hobson's Choice) has passed into a saying, which implies "this or none." Hobson died in 1631.
- Hockey**, 6, 277.
Ice, 6, 109.
Lawn, 6, 277.
- Hoe, Richard March**, 12, 303.
- Hoffmann, August Heinrich**.—(1798-1874.) A noted German poet, philologist and literary historian.
- Hofmann**, the painter, 9, 327.
- Hogarth, William**, 9, 275.
- Hogg, James**.—(1770-1835.) A noted Scottish poet; sometimes called "The Ettrick Shepherd."
- Hogshead**, Size of a, 13, 149.
- Hohenstaufen**, House of, 10, 275.
- Holbein, Hans**, "The Elder."—(1460-1524.) A noted German historical painter, 9, 322.
Van Dyke quoted on, 9, 306.
- Holberg, Ludwig von**.—(1684-1754.) A celebrated Danish author and dramatist.
- Holden**, Professor, on Study, 8, 132.
- Holidays** in several states, 13, 98.
Old English, 13, 100.
- Holland**, or **The Netherlands** (its official name), is a kingdom and ancient maritime nation in Western Europe. It is situated to the west of Prussia and to the north of Belgium, and has an area, besides its colonies, of 12,648 square miles, with a population of 5,104,000. Its chief cities are Amsterdam, Rotterdam, The Hague (the seat of the government), Utrecht, Haarlem, etc. The present reigning sovereign, who is of the House of Orange, is Queen Wilhelmina, born in 1880, and succeeded to the throne in 1890. The government is an hereditary constitutional monarchy; it has had a varied and troubled history, having at times been a possession of England, annexed by France, erected into a Batavian republic, united with and afterward separated from Belgium. The first constitution of the country after its reconstruction as a separate kingdom was given it in 1815, and has since been revised, in 1848 and again in 1887. Its people are generally called Dutch, and are of the Germanic race. The area of its colonial possessions is 736,400 square miles, with an estimated population of over 34 millions.
- Holland**, History of, 10, 299.
- Holland, George**.—(1791-1870.) A noted Anglo-American comedian.
- Holland, Josiah Gilbert**, 8, 336.
- Holland Patent**.—A grant of land made in 1686 by Governor Dongan of N. Y. to six Dutch patentees. The land was situated in what is now Orange County, N. Y., and was to be held in free and common socage of King James II.
- Hollar, Wenceslaus**.—(1607-1677.) A distinguished engraver; born in Prague, but spent his life largely in England.
- Hollins, George Nichols**, 11, 242.
- Holly**, 4, 412.
Mountain, 4, 412.
- Hollyhock**, 4, 412.
- Holm, Saxe**.—The pseudonym of the unknown author of a number of stories published about 1874.
- Holmes, Oliver Wendell**, 12, 303.
Life of, 8, 348.
quoted on the Nautilus, 4, 371.
- Holstein**.—In Prussia, the southern part of the province of Schleswig-Holstein.
- Holt, Joseph**.—(1807-1894.) An American statesman and jurist. He was Secretary of War for a time in 1861 and was then appointed judge-advocate-general of the U. S. army, with the rank of brig.-gen., which position he held during and after the Civil War. He took a conspicuous part in the war and reconstruction periods.
- Holy Alliance, The**.—A league ratified at Paris, Sept. 26, 1815, between the sovereigns of Russia, Austria, and Prussia; its object the perpetuation of peace. The alliance was joined afterward by the sovereigns of all European countries except Rome and England; it terminated after the French revolution of 1830.
- Holy Alliance**, 10, 366; 11, 261.
- Holy Grail**, 3, 442.
Origin of, 1, 194.
- Holy Innocents' Day**, 13, 101.
- Holy League**, 10, 294.
- Holyoke**.—A city in Mass., situated on the Conn. River. The center of a large paper-manufacturing industry. Pop. (1900), 45,712.
- Holy Roman Emperor**, 10, 355.
- Holy Roman Empire**.—That empire ruled over by the emperor claiming to be the representative of the ancient Roman Empire, and as such asserted, in theory, authority over western and central Europe. It was called "holy" by reason of the close relations between state and church. It was founded by Charlemagne, who was so crowned on Christmas Day, 800.

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Holyrood Palace.—In Edinburgh, Scotland, a royal palace, founded in 1128.

Homburg.—In Prussia, a town of the province of Hesse-Nassau. It is a popular health resort, being noted for its medicinal springs.

Home Counties.—The counties containing, and immediately surrounding, London, England. They are Middlesex, Surrey, Kent, Essex, and Hertford.

Home, The, 1, 1.

American, 1, 1.

Bath-room, 1, 20.

decoration, 1, 11.

Dining-room, 1, 15.

Drawing-room, 1, 12.

during the Renaissance, 1, 6.

Garden, 1, 38.

Grounds, 1, 37.

Hall, 1, 11.

Income and rent, 1, 37.

Kitchen, 1, 23.

Laundry, 1, 25.

Library, 1, 15.

Living-room, 1, 15.

Nursery, 1, 20.

Owning a, 1, 38.

Parlor, 1, 12.

Renting a, 1, 38.

Sleeping-room, 1, 18.

Home and School to be united, 2, 449.

Child-training best conducted in the, 2, 448.

Education on sexual life, 2, 398.

in city and country compared, 1, 1.
feudal times, 1, 6.

Influence of Chivalry on the, 1, 6.

Christianity on the, 1, 6.

Kindergarten at, 7, 11.

training and school training compared, 2, 450.

of defective children, 2, 373.

Home Life, 1, 3.

in America compared with English, 1, 5.

Its possibilities neglected, 2, 380.

Home-making arts, Study of, 2, 435.

Home management of common diseases, 1, 320.

Mental training at, 8, 158.

Home Rule, 10, 382.

ties among the Chinese, 1, 5.

Greeks, 1, 5.

Romans, 1, 6.

Homer.—The earliest and greatest of the epic poets of Greece, and the reputed author of the "Iliad" and the "Odyssey." He is supposed to have lived 900 years before the birth of Christ, and when old and blind to have wandered from city to city rehearsing his verses. No fewer than seven cities contend

with each other for the honor of giving him birth within their walls. He is reckoned the prince of minstrels; his verse being pervaded by solemn grandeur and by intense national feeling, as well as by great pictorial ornamentation, virtues that have given to the "Iliad" especially the character of a psalter or sacred writing in the eyes of the Greeks. Pope's translation of Homer still holds its high place.

Homer, Winslow.—Born at Boston, 1836; an eminent American painter.

Homes, Country, 1, 9.

Homestead.—A town in Pa. near Pittsburg, noted for its manufactures of steel plates and rails. In 1892 it was the scene of a strike which was attended with much rioting and bloodshed. Pop. (1900), 12,554.

Homestead Law, 12, 303.

"**Home, Sweet Home.**"—A popular song, the words of which were written by John Howard Payne. The music is attributed to Sir Henry Rowley Bishop (1786-1855).

Home Study of Art, The, 1, 201.

Oil Color Painting, 1, 206.

Water Color Painting, 1, 208.

China Painting, 1, 210.

Pottery, 1, 215.

Painting on Silk, 1, 224.

Painting on Velvet, 1, 225.

Modeling in Clay and Wax, 1, 227.

Homing pigeons, 4, 111.

Honduras.—A republic of Central America, situate to the southeast of British Honduras, and surrounded by Guatemala, San Salvador, Nicaragua, and the Caribbean Sea. Early in its history it was conquered by the Spanish, and between the years 1823-39 it was a state in the Central American Union, since when it has been independent. Its area is 46,400 square miles, with an estimated population of about 407,000, mostly aborigines, with a sprinkling of Spanish-speaking whites. It has ports on the Pacific and the Atlantic; its capital, Tegucigalpa, is in the center of the state. It has large mineral resources, though they are not much worked; its chief exports are, besides metals, hides, fruits, indigo, and cabinet woods.

Honduras, Bay of.—An inlet of the Caribbean Sea lying north of Honduras.

Hone, William.—(1779 or 80-1842.) An English writer and political satirist.

Honesty, Training in, 2, 461.

Honey Guide, 4, 194.

Honey-wine herb, 5, 23.

Poisonous, 5, 14.

Wild bee's, 4, 195.

Hong-Kong.—An island and English crown colony on the southeast coast of China, 90

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- miles south of Canton. It is the great center for British commerce with China and Japan, and a military and naval station of the first importance. Its affairs are administered by a governor, aided by an executive council. The area of the colony is about 30 square miles, its capital is Victoria, which extends for upward of four miles along the south shore of the beautiful and commodious harbor. The population of Hong-Kong, including the military and naval establishments, is about 250,000, of which probably 10,000 are Europeans. In 1898, China leased to Great Britain portions of her territory adjacent to Hong-Kong, including the port of Kaulung and the waters of Mirs Bay, and Deep Bay. This area (400 sq. miles in extent), the British occupied in the following year. Estimated population in 1898, 254,400.
- "Honi soit qui mal y pense"** ("Evil to him who evil thinks").—According to tradition, the countess of Salisbury lost her garter at a court ball and King Edward III. presented it to her with the above words. They were adopted afterward as the motto of the Order of the Garter.
- Honiton.**—In Devonshire, England, a town noted for its manufacture of lace.
- Honolulu.**—The capital of the Hawaiian Islands, and their chief seaport and commercial town. Pop., 39,306.
- Honor, 13, 118.**
- Honoria, 10, 403.**
- Honorius, 10, 232.**
- Hooch, Pieter de.**—Dutch painter, 9, 310.
- Hood, John Bell.**—Soldier; sketch of, 12, 21.
- Hood, Mount.**—One of the highest summits of the Cascade Range in Ore., about 11,200 ft. high.
- Hood, Robin.**—In English tradition, an outlaw and popular hero.
- Hood, Thomas.**—(1798-1845.) A famous English poet and humorist.
- Hood, Thomas, 8, 22.**
- Hooft (*hōft*), Pieter Corneliszoon.**—(1581-1647.) A noted Dutch poet and dramatist.
- Hooghly, or Hugli.**—The western channel of the Ganges River; Calcutta is situated on it. Its length is 145 miles.
- Hook, Theodore Edward.**—(1788-1841.) A famous English humorist and author.
- Hooker, Joseph, 12, 28.**
referred to, 14, 102.
- Hooker, Richard.**—Born about 1553; died, 1600. A celebrated English divine and theological writer.
- Hooker, Thomas, 11, 46.**
- Hooper, William, 11, 106.**
- Hoosac tunnel, 5, 421.**
- Hoosick Falls.**—A town of New York noted for its manufactures, especially of mowing machines. Pop. (1900), 5,671.
- Hoot owl, 4, 144.**
- Hope, Alexander James Beresford;** later BERESFORD-HOPE.—(1820-1887.) A noted English Conservative politician and writer.
- Hope, Anthony.**—See HAWKINS, ANTHONY HOPE.
quoted on advice to authors, 8, 240.
- Hopetoun, Earl of, 11, 33.**
- Hopi Indians, 10, 128.**
- Hopkins, Edward, 11, 58.**
- Hopkins, Mark.**—(1802-1887.) He was president of Williams College (1836-72), and also of the American Board of Commissioners for Foreign Missions from 1857 until his death.
- Hopkins, Stephen, 11, 106.**
- Hopkinson, Joseph, 11, 242.**
- Hops (*Humulus lupulus*).**—A perennial plant of the order Cannabinaceæ, the only plant of its genus. It has long twining stems, 3-5 lobed, rough leaves. The flowers are diœcious—male and female. The ripened cones of the female flowers are the parts used in brewing. In 1900 the hop crop of the U. S. was estimated at 208,000 bales of 180 lb each.
- Hops, 5, 61.**
Yield of, 5, 61.
- Horace, Quintus Horatius Flaccus.**—A great and popular Latin lyrist and satirist, who lived between the years 65 and 8 B. C. He was the son of a freedman of Venusia and was well educated, having studied literature and philosophy at Athens, after which he served in the army of Brutus, though he abandoned his military career in 42 B. C. at Philippi. The production of his "Epodes" procured him the patronage and friendship of Mæcenas, the Roman statesman and patron of letters. He was also patronized by Augustus and lived in comfort, if not in luxury, on his estate near Rome—the "Sabine farm," which he has immortalized in his verse. Besides the "Epodes," he wrote Odes, Satires, and Epistles, which have all the elegance and grace of a scholar and man of culture, with a delightful fragrance of the old rural life of Italy.
- Horehound, 5, 61.**
- Horizon, 5, 109.**
Celestial, 5, 109.
- Horizontal bar, 6, 38.**
- Hornbeam Hop, 4, 425.**
- Hornblende, 5, 448.**
- Hornbook.**—Before the art of printing was known, the elements of reading were learned from a leaf containing the alphabet, a number

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- of syllables, the numerals, etc. — this leaf was fastened to a wooden frame and covered, for protection, by a transparent sheet of horn.
- Horned lark**, 4, 173.
 pout, 4, 306.
 Characteristics of the, 4, 307.
- Hornellsville**.— A city in N. Y., on the Canisteo River, noted for its car manufactures. Pop. (1900), 11,918.
- "Hornet," The**, 11, 242.
- Hornet, White-faced**, 4, 331.
 Characteristics of the, 4, 331.
- Hornets and wasps**, 4, 330.
- Horn silver**, 5, 438.
- Horse**, Alexander the Great's, 4, 12.
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 Brutality of the check-rein, 4, 14.
 Bucephalus, 4, 12.
 Bur-bit, Cruelty of, 4, 14.
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 Classes of the, 4, 12.
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 Evolution of the, 5, 466; 4, 15.
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 History of the, 4, 11.
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 Mustang, 4, 13.
 Norman or Percheron, 4, 12.
 Pony, 4, 13.
 Sable Island pony, 4, 13.
 Spanish gruet, 4, 13.
 Suffolk Punch, 4, 12.
- Horse-chestnut**, 4, 451.
 Red, 4, 452.
- Horse-fly**, 4, 351.
- Horse Mackerel**, 4, 288.
- Horse-mint**, 5, 67.
- Horse-power**, 5, 420.
 Electric, 5, 420.
 how calculated, 5, 420.
 Steam, 5, 420.
- Horse-radish**, 5, 61.
- Horse Shoe Bend** (Ala.,) **Battle of**, 11, 242.
- Hortense** (EUGÉNIE HORTENSE DE BEAUHARNAIS).— Daughter of the Empress Josephine, wife of Louis Bonaparte, mother of Napoleon III.
- Hortus siccus**, or **herbarium**, 4, 401.
- Horus**.— A solar god of Egyptian mythology.
- Hosmer**, Miss **Harriet**, 9, 412.
- Hospitality**, What it consists of, 1, 41.
- Hcstess**, 1, 42.
 a director of conversation, 1, 80.
 and her guests, 1, 42.
 Duties at dinner, 1, 52.
- Hôtel de Cluny**.— In Paris; the palace of the abbots of Cluny in Burgundy; built in the 15th and 16th centuries, now used as a museum.
- Hotel des Invalides**.— A famous institution of Paris, for the care of disabled soldiers; founded in 1670.
- Hotel Management**, 13, 410.
- Hot Springs**.— A town in Ark., noted for its hot springs; a health resort. Pop., (1900), 9,973.
- Hottentot-Bushmen**.— A race of South Africa.
- Hottentots**.— A name given to the natives of the Cape of Good Hope by the first colonists in that region.
- Hottest Spot on Earth, The**.— One of the hottest regions on earth is along the Persian Gulf, where little or no rain falls. At Bahrein the arid shore has no fresh water, yet a comparatively numerous population contrive to live there, thanks to the copious springs which break forth from the bottom of the sea. The fresh water is got by diving. The diver, sitting in his boat, winds a great goat skin bag around his left arm, the hand grasping its mouth; then takes in his right hand a heavy stone, to which is attached a strong line, and thus equipped he plunges in, and quickly reaches the bottom. Instantly opening the bag over the strong jet of fresh water, he springs up the ascending current, at the same time closing the bag, and is helped aboard. The stone is then hauled up, and the diver, after taking breath, plunges in again. The source of the copious submarine springs is thought to be in the green hills of Osman, some 500 or 600 miles distant.
- Houdin** (ö-dan'), Jean Eugène Robert.— (1805-1871.) A celebrated French conjurer and mechanician.
- Hound**, 4, 20.
- Hour-glass**, 13, 94.
- House**, Choice of a, 1, 8.
 in America, First brick, 1, 223.
 Hall, 1, 11.
 How it should face, 1, 10.
 in large cities, 1, 8.
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- House cleaning**, 1, 104.
 Care of linoleum, 1, 107.
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- Housekeeper** as a financier, 1, 100.
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 Marketing, 1, 108.
 Mistress and servants, 1, 132.
 Passing food, 1, 113.
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 Servant question, 1, 130.
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 Setting the table, 1, 112.
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 Sweeping, 1, 125.
 Table service, 1, 112.
 Training girls in, 1, 69, 97.
 Treatment of servants, 1, 133.
 Utilizing remnants, 1, 122.
 Value of system in, 1, 99.
 Wife's allowance for, 1, 100.
"House of the Seven Gables, The."—A novel by Hawthorne, published in 1851.
House wren, 4, 165.
Houssaye (*ö-sā'*), **Arsène**.—(1815–1896.) A noted French critic and novelist.
Houssaye, Henri.—Born, 1848; a French historian, son of Arsène Houssaye.
Houston, Sam, 11, 243; 14, 79.
Houston.—A city in Tex., an important railway and commercial center. It was settled in 1836, and for a period was the capital of the state. Pop. (1900), 44,633.
Houyhnhnms (*hou'inmz*).—In Swift's "Gulliver's Travels," a community of horses endowed with human intelligence.
Hovenden, Thomas.—(1840–1895.) A distinguished American painter.
Hovey, Alvin P., 12, 28.
Hovey's Babies, 12, 28.
Howard, Catherine, 10, 301.
Howard, Eda C., on "Stenography," 13, 213.
Howard, L. O., on Mosquitoes, 4, 354.
Howard, Oliver Otis, 12, 28.
Howard, Thomas.—(1473–1554.) Earl of Surrey and third Duke of Norfolk. A noted English soldier and politician; uncle of Catherine Howard, fifth wife of Henry VIII.
Howard Association.—An association of volunteer nurses during the yellow fever epidemics in the Southern States, 1868–79.
Howard University.—An institution of learning, founded at Washington, D. C., in 1867. It was especially designed for the higher education of the colored race, but is open to all races and creeds.
Howe, Elias, Life of, 5, 282.
 referred to, 8, 206; 14, 178.
Howe, Julia Ward, Life of, 8, 289.
 on "The Highest Type of Girl," 1, 252.
Howe, Dr. Samuel Grindley, 8, 289.
Howe, William (Viscount), 11, 106.
Howells, William Dean.—An American novelist and poet of the realistic school, born in Ohio in 1837, and at one time editor of the "Atlantic Monthly," in charge of the Editor's Study of "Harper's Monthly," and editor also for a while of "The Cosmopolitan Magazine." He is perhaps the best known of contemporary American men of letters, as he has been one of the most industrious. He has traveled considerably in Europe, and in the years 1861–65 was U. S. consul at Venice, to which fact we owe his "Italian Journeys" and "Venetian Life." Among the early products of his pen to bring him into notice were "Their Wedding Journey," and "A Chance Acquaintance," which showed his delightful craftsmanship in letters and his art instinct. These were followed by "A Foregone Conclusion," "The Lady of the Aroostook," "The Undiscovered Country," "A Fearful Responsibility," "A Modern Instance," "A Woman's Reason," "Dr. Breen's Practice," and "The Rise of Silas Lapham"—the latter a typical American novel, told with much skill, and bright with humor and kindly human sympathy. To these works he has added many others, perhaps the best of which are "A Hazard of New Fortunes," "The Quality of Mercy," and "The Day of Their Wedding." He has also published a "Life of Lincoln," "My Literary Passions," "Modern Italian Poets," "Poems of Two Friends" (in conjunction with John J. Piatt), together with several farces, and a series of collected essays of much charm, entitled "Impressions and Experiences."
Howells, William Dean, Advice to authors, 8, 230.
 First check, 7, 474.
 on good manners, 2, 303.

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How to Tell a Story, G. Stanley Hall, 3, 6.

Howling monkey, 4, 66.

Hoyle, Edmund.—(1672-1769.) An English writer on games.

Hoyt, Rev. Wayland, "Chapel Car Syndicate," 8, 207.

Huamantla (Mexico), Battle of.—Gen. Lane set out from Vera Cruz about Oct. 1, 1847, with 2,000 Americans, to reinforce the garrisons between there and the City of Mexico. Santa Anna, learning of Lane's approach to Puebla, set out to intercept him with 4,000 Mexicans and six pieces of artillery. On the night of Oct. 8, 1847, the Mexicans were encamped in the city of Huamantla, and Capt. Walker was sent forward with a company of cavalry to give them battle. Walker's cavalry fought desperately in the face of superior numbers, until the arrival of the infantry when the Mexicans were put to flight, with a loss of 150 men. Capt. Walker was killed in the fight.

Huascar, 11, 39.

Huayna Capac, 11, 39.

Hubbard, a painter, 9, 330.

Hubbarton (Vt.), Battle of, 11, 106.

Huber, Francis, Blindness of, 8, 27.

Hübner, Rudolf Julius Benno.—(1806-1882.) A German historical painter.

Huckleberry, Squaw, 5, 14.

"Hudibras".—A poetical satire written by Samuel Butler, chiefly against the Puritans. It appeared 1663-78.

Hudson, Henry, 11, 47.

Hudson, Thomas Jay, on success, 8, 126.

Hudson Bay.—A large inland sea in the Dominion of Canada. It was explored by Henry Hudson in 1610. The land around it was known until 1869 as Hudson Bay Territory, and was owned and operated by the Hudson Bay Company under a charter granted in 1670 by King Charles II. In 1869, the company was bought out by the British and transferred to the Canadian Government. The territory now forms a part of the Dominion. The price of the transfer was one and a half million dollars.

Hudson Bay Company.—A trading corporation chartered by Charles II., in 1670. The charter was granted to Prince Rupert and other noblemen to discover a new passage to the South Sea, and to trade in the products of British North America. The original charter secured to Prince Rupert and his associates the absolute proprietorship, subordinate sovereignty, and exclusive traffic of an undefined territory which, under the name of Rupert's Land, comprised all the region discovered or to be discovered within the entrance of Hudson Strait. The company afterward (in 1821) combined

with the Northwest Fur Company, and became a formidable rival of the U. S. in claiming the northwest part of America. War nearly resulted from their effort to hold Oregon by force, but the boundary was finally settled in 1846.

Hudson River.—A river in N. Y., rising in the Adirondacks and flowing into New York Bay. It is noted for its picturesque scenery. Length, about 350 miles.

Hudson Strait, 11, 47.

Huger, Frances Kinloch, 11, 243.

Huger, Isaac, 11, 107.

Hugh Capet (*hū ka'pet*).—King of France (987-996), 10, 243.

Hughes, John.—(1797-1864.) A Roman Catholic prelate. He was appointed bishop of New York in 1842 and archbishop in 1850. He was the founder of St. John's College, Fordham, N. Y., in 1839.

Hughes, Thomas.—(1823-1896.) An English author, reformer, and politician. He was the founder of the "Rugby Colony" in Tennessee. He wrote the "Tom Brown" series of books.

Hugin and Munin, 10, 122.

Hugo, Victor.—The greatest of French poets, a distinguished novel-writer, and leader of the modern romantic school in France, was born in 1802 and died in 1885. Early in his career he competed in verse for the prizes of the French Academy, and his success probably influenced him to pursue the career of a man of letters, in which he was to win renown, as well as the honor of being made a peer of France. Early in the thirties, he entered the field of the historical novel, with the publication of the picturesque mediæval romance "Notre Dame de Paris." This was shortly afterward followed by a sheaf of lyrical verse, which contains much of his best poetry, "Les feuilles d'Automne" ("Autumn Leaves"), and one of his finest plays, "Marion Delorme." After these came "Le Roi s'Amuse" ("The King Amuses Himself"), which fell under the ban of the public censor, owing to its anti-monarchical sentiments; the dramas "Lucretia Borgia" and "Marie Tudor"; "Ruy Blas" and "Hernani," written for the stage; and a collection of admirable verse, "Les chants du Crépuscule," "Odes and Ballads," and "Odes and Diverse Poems." He now entered the political field and his muse was in a measure silent, and after the *coup d'état* of 1851, when he satirized Napoleon III., whom he at first hailed, he was banished for a while. In the sixties he published his great story "Les Misérables," a romance of modern life, translated into many languages; "The Toilers of the Sea," "L'Homme qui

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- Rit" ("The Man who Laughs"), and, in 1872, "L'Année Terrible," a record of Paris during the siege. This was followed by "Quatre-vingt-treize," "L'Histoire d'un Crime," and a volume of charming domestic lyrics, entitled "L'art d'être Grand-père" ("The Art of Being a Grandfather").
- Hugo, Victor**, 14, 24.
- Huguenots**.—A name given in 1560 to the Protestants in France. (See HENRY IV., of France.)
- Huguenots**, 10, 295, 311.
- Hulder, or Elves**, 10, 120.
- Hull, Isaac**, 11, 243.
- Hull, John**, 13, 164.
- Hull, William**, 11, 243.
- Humber**.—The estuary formed by the junction of the Ouse and Trent rivers, between Lincolnshire and Yorkshire, England.
- Humbert I.**—(1844-1900.) King of Italy (1878-1900).
- Humboldt, Baron Alexander von**.—An eminent German naturalist and man of science (b. 1769, d. 1859). Though residing for the most part of his life in Berlin, he traveled widely in his day, pursuing his researches in both North and South America, as well as in Central Asia. In 1829 he was a member of an expedition sent out by the then emperor of Russia to northern Asia and to the region of the Ural and Altai mountains and the Caspian Sea. He also visited Cuba and many parts of Spanish America. His published writings, which deal with the countries he visited and made researches in, embrace an "Examination of the Geography of the New Continent," an account of his Asiatic journey, of his visit to Cuba and New Spain, "Voyages to the Equinoctial Regions of the New (American) Continent," and a great treatise, entitled "The Cosmos," summing up his treasures of scientific knowledge in the fields of mineralogy, terrestrial magnetism, sidereal science, and on the distribution of animal and plant life. His brother, Karl Wilhelm von Humboldt, was a distinguished scholar and statesman (b. 1767, d. 1835). In 1810 he founded the University of Berlin and was for a time German ambassador at Vienna. His later years were devoted to the study of comparative philology, for which science "he ransacked the dialects of three continents."
- Humboldt Lake, or Humboldt Sink**.—A body of water in western Nev., with no outlet to the sea.
- Humboldt River**.—It rises in Nev. and flows into Humboldt Lake. The valley through which it runs is traversed by the Central Pacific Railroad. Its length is about 350 miles.
- Hume, David**.—(1711-1776.) A celebrated Scottish historian and philosopher, best known by his "History of England" (1754-61).
- Humerus**, long bone of the arm, 1, 273.
- Hummel, Johann Nepomuk**.—(1778-1837.) A noted German composer for the pianoforte.
- Humming-bird**, Eggs of the, 4, 117.
Nest of the, 4, 117, 201.
Ruby-throated, 4, 200.
Sickle-bill, 4, 202.
- Humor**, Love of, to be cultivated, 2, 462.
- Humphreys, Judge West H.**, 12, 305.
- Humulus lupulus**, 5, 61.
- "**Hundred Days**," 10, 359.
- Hundred Years' War**.—(1338-1453.) Wars between France and England. Though there was not constant warfare for 100 years, yet there was no lasting peace. The English were at first victorious in such battles as Crécy, Poitiers, Agincourt, etc., but they were finally expelled from France.
- Hundred Years' War**, 10, 266, 267.
- Hungarian Constitution, The**.—Hungary is a constitutional state, with power to grant full and complete political freedom to her people. The king, who is also emperor of Austria, possesses the ordinary powers of a constitutional sovereign, but with this exception, that the powers are carefully guarded. No royal Act is valid unless countersigned by a responsible minister. The king appoints, through his ministers, the officials of the state, but only citizens can be appointed. He summons and dissolves Parliament, and appoints bishops for the Roman Catholic Church. The legislature consists of two Houses: (1) The Table of Magnates—or the House of Lords. The Table was reformed in 1886 and is now made up of hereditary peers, who pay a land tax of 3,000 florins; the great officers of the Church—Catholic and Protestant—and life peers appointed by the Crown. (2) The Table of Deputies, or the House of Representatives. This consists of 453 members. Forty are elected by the Diet of Croatia—these, however, take part only in matters pertaining to their own country, and the others by the people on a limited franchise.
- Hungarian Insurrection**.—(1848-1849.) A rising in Hungary against the tyranny of Austria. In April, 1849, the Hungarians declared themselves an independent republic, with Kossuth as governor. Russia assisted Austria to subdue Hungary and Kossuth escaped. Constitutional liberties were restored by Austria in 1867.

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Hungarian Race Problem, The.—The same racial difficulty confronts Hungary as Austria. The population of Hungary is, roughly speaking, 19,069,000, divided into 8,426,000 Magyars, 2,100,000 Germans, 3,000,000 Rumanians, and about 5,200,000 Croats, Serbs, and other Slavs. Though the problem is not so acute in Hungary as in Austria, yet it is one which commands the serious attention of the people. The Magyars are employing in Hungary exactly the same policy of denomination as the Germans in Austria, but with a little more success. The German element, though strong, is too scattered to offer much resistance, and in some cases rather than come under Magyar rule the Germans leave the country. The two most difficult obstacles to Hungarian sway are the Rumanians and the Croats, and of the two the Croats are more persistent in their opposition. Outwardly, at all events, the Rumanians yield, but the Croats, on the other hand, have already obtained a larger measure of self-government than any other people under Magyar rule. Hungary may ultimately triumph, but recognizing the proximity of the Balkan States, the uncertainty of their destiny, and the complexity of the whole problem, it will take years of patient toil before the Magyar element subdues the tenacity with which the different races cling to their respective languages.

Hungerford, Mrs. (MARGARET HAMILTON ARGLES).—An Irish novelist who wrote under the pseudonym of "the Duchess." She died in 1897.

Hung-Ke, 10, 158.

Hunkers, 11, 382.

Huns, The.—A race of Nomads, of probably Mongolian origin, whom we first hear of about the 3d or 2d century B. C. inhabiting Central Asia, and threatening the Chinese frontier from the steppes of Tartary. From here they moved westward to the region between the Caspian and the Dneister, where they all but destroyed the Alani. Continuing their westward course, they reached the Danube, where, in the 4th century A. D., they drove the Visigoths, or Western Goths, into Roman territory. With the aid of the Goths, they next attacked Rome, and at Adrianople, in 378, defeated the imperial armies and slew the Emperor Valens. In the 5th century, under Attila, their famous king, who called himself "the scourge of God," they laid waste the provinces of the Eastern Empire and levied heavy tribute upon Theodosius II., after which, in 451 A. D., they invaded Gaul, but were defeated near Châlons-sur-Marne, France, by Aëtius and his compos-

ite army of Romans, Franks, and Visigoths. In spite of this setback, Attila and his Huns now invaded Italy, but they never recovered from the loss they sustained at Châlons, and were again beaten at Pannonia, in Hungary, having been dissuaded by Pope Leo I. from falling upon and sacking Rome. After this the Huns fell asunder, Attila having died in A. D. 453. See Gibbon's "Roman Empire."

Hunt, Holman.—Distinguished English painter, 9, 286, 288.

Hunt, James Henry Leigh.—(1784-1859.) An English poet, essayist, and writer.

Hunt, Richard Morris.—(1828-1895.) A noted American architect.

Hunt, Walter.—A New York mechanic who first conceived the true idea of the sewing machine. (See HOWE, ELIAS.)

Hunt, William Morris.—(1824-1879.) An American painter, a pupil of Millet and Couture, 9, 331.

Hunter and the hounds, Turkish fable, 3, 183.

Hunter, David, 12, 29.

Hunter, John, 14, 11, 177.

Hunter, Robert Mercer Taliaferro, 12, 29, 304.

Huntington, Colis P, Early marriage of, 1, 237. on success, 8, 125.

referred to, 14, 45.

Huntington, Daniel.—Born at New York, 1816. An eminent portrait painter, and president for many years of the National Academy. Among his chief productions is "The Republican Court in the Time of Washington."

Huntington, Frederick Dan.—Born at Hadley, Mass., 1819. An eminent bishop of the Protestant Episcopal church of America. He held the Plummer professorship of Christian Morals in Harvard College (1855-60). He subsequently withdrew from the Unitarian denomination and became an ordained minister in the Protestant Episcopal church. He was one of the founders of the "Church Monthly," and was appointed bishop of N. Y. in 1869.

Huntington, Samuel, 11, 107.

Huntsman's Cup, 5, 20.

Huntsville.—A city in Ala., noted for its manufactures. Pop. (1900), 8,068.

Hunyady Janós.—(1387-1456.) A Hungarian general who defended Belgrade against the Turks, 1456.

Hurlbut, Stephen Augustus, 12, 29.

Huron, Lake.—One of the great lakes of the St. Lawrence system, between the U. S. and Canada. It has an area of 23,800 sq. miles; is 574 feet above sea-level, and has an average depth of 1,000 feet. It is connected with Lake Superior by St. Mary's River, and with Lake Michigan by Mackinaw Strait. Its waters

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- empty into Lake Erie through River St. Clair, Lake St. Clair, and the Detroit River.
- Huronian rocks**, 5, 462
- Hurricane, Speed of a**, 13, 150.
- Hurst, John Fletcher**.—Born near Salem, Md., 1834. A bishop of the Methodist Episcopal church, distinguished as a church historian. He became professor of historical theology in Drew Theological Seminary at Madison, N. J., in 1871, and was made bishop in 1873. He wrote "History of Rationalism," "Outline of Church History," "Short History of the Reformation," "The Success of the Gospel," etc.
- Husband and wife, Law of**, 13, 309.
- Hushan, Battle of**, 10, 163.
- Huss, John**.—(1369-1415.) A Bohemian religious reformer who was burned at the stake as a heretic by order of the Council of Constance.
- Huss, John**, 10, 289.
- Hutchinson, Mrs. (ANNE MARBURY)**.—Born in England about 1590; killed by Indians near Hell Gate, N. Y., 1643. A noted religious enthusiast. She was an antinomian who emigrated to Mass. in 1634 whence she was banished (1637).
- Hutchinson, Mrs. Anne**, 11, 45.
- Huxley, Thomas Henry**.—A distinguished English biologist, professor of physiology and natural history, and a writer of high intellectual caliber, was born in 1825, and died in 1895. He was a man of great and varied attainments, as well as of wide reading and research, and in early life a considerable traveler. Soon after graduating he studied medicine and obtained the position of assistant-surgeon on one of the ships of the British navy, on which he made a lengthened cruise in South Pacific waters. On his return to England, he filled several positions and professorships and was for many years connected with the Geological Survey of England. After the publication of Darwin's "Origin of Species," he became an ardent defender of the doctrine of organic evolution, and somewhat of a materialist. He was one of the ablest of modern zoölogists, and a writer not only of rare ability, but of incomparable force and pure English style. His writings embrace a work on "Crayfish," on "The Anatomy of Vertebrate and Invertebrate Animals," a work on "Physiography," "Lessons in Physiology," on "Ocean Hydrozoa," "Lay Sermons," "American Addresses," on "The Physical Basis of Life," on "Man's Place in Nature," "Science and Culture," on "The Classification of Animals," and an introductory work on "Zoölogy."
- Huygens (hi-genz), Christian**.—(1629-1695.) A famous Dutch astronomer, physicist, and mathematician. He discovered the ring of Saturn, improved the telescope, invented the pendulum clock, and developed the wave-theory of light.
- Huyghens**, inventor of the clock, 13, 94.
- Hvergelder, Spring of**, 10, 118.
- Hwing-tsung**, 10, 154.
- Hyacinth**, 5, 38.
- Hyacinth macaw**, 4, 209.
- Oriental, 5, 38.
- White, 5, 28.
- Wild, 5, 38.
- Hyacinthus**, 10, 92.
- Hyades**, 5, 140.
- Hyde Park**.—A park in Westminster, London. It has an area of 390 acres. It is the principal recreation ground of London.
- Hyderabad**.—The most important Moham-medan and native state in India, situated between Bombay and Madras. Hyderabad or Haidarábád is the capital, situated on the Musi River. The pop. of the state is nearly 12 millions; and of the city (1901), 446,291. The state sided with England in the Indian Mutiny of 1857.
- Hyder Ali**.—An East Indian potentate and enemy of Britain, who, though of obscure origin, rose from being a soldier in the army of Mysore to be a maharajah. He and another Mussulman potentate, the nizam of the Deccan, in 1767, incensed at the Madras Government, took up arms against the English and with Hyder Ali's cavalry ravaged the country to the walls of Madras. The Mysore army was not only well disciplined but excellently handled, and for a time the fate of Southern India was in doubt. At this juncture, Warren Hastings, afterward governor-general of India, but who was at the period member of the Madras council, with the help of Sir Eyre Coote, saved the country for the British, Coote having in 1781 thrice defeated Hyder Ali, who in the previous year had invaded the Carnatic in alliance with the French and the Mahrattas. Hyder Ali died in 1782, though his son, Tippoo Sahib, lived to direct two later wars against the English, dying in the breach of Seringapatam when that fortress was stormed under General Harris. The assault at Seringapatam is famous in East Indian history; it was led by General Baird, and Col. Sir Arthur Wellesley, afterward Duke of Wellington, participated in it.
- Hydra**, 4, 380.
- Hydrangea**, 5, 61.
- Hydrated iron ore**, 5, 437.
- Hydraulic press**, 5, 261.
- pressure, 5, 261.

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- Hydraulics**, 5, 259.
- Hydrocarbons**, 5, 178.
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- Hydrochloric acid**, 5, 188.
- Hydrocyanic acid**, 5, 182.
- Hydrofluoric acid**, 5, 189.
- Hydrogen**, a constituent of water, 5, 157.
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- Hydromechanics**, 5, 258.
- Hydrometer**, 5, 255.
- Hydrostatics**, 5, 258.
- Hydroxyl radical**, 5, 174.
- Hygeia**, 10, 91.
- Hygiene for girls**, 2, 445.
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- Hyena**, 4, 76.
Characteristics of the, 4, 76.
Food of the, 4, 76.
Fur of the, 4, 76.
Geographical maps of the, 4, 76.
Habits of the, 4, 76.
- Hyksos**, or **Shepherd Kings**.—A foreign race of kings who ruled over Egypt for 511 years, beginning about 2000 B. C.
- Hyksos Kings**, 10, 179.
- Hyoid bones**, 1, 273.
- Hyoscyamin**, 5, 60.
- Hyoscyamus**, 5, 60.
- Hypatia**.—A celebrated female philosopher, who taught at Alexandria in the 4th and 5th centuries. She is the heroine of Charles Kingsley's novel "Hypatia," published in 1853.
- Hyperboreans**.—A people who, according to Greek legend, lived beyond the north wind, and were free from the cold blasts and enjoyed sunshine and fruitfulness. They lived for a thousand years. The name came to be applied to inhabitants of northern regions generally.
- Hyperion**.—One of the Titans, son of Uranus and Gæa.
- Hypogastric plexus**, 1, 284.
- Hypoglossal nerves**, 1, 284.
- Hyposulphite of Soda**, 5, 205.
- Hyppolyte** (*ē-po-lēť*).—Louis Mondestin Florvil (1827–1896). A general and politician of Haiti, who was president of the republic for seven years.
- Hypsilanti**, 10, 362.
- Hypsuranius**, 10, 81.
- Hyssop**, 5, 61.

I

- Iambus**, 8, 406.
- Iapetus** (*ī-ap'e-tus*).—In Greek mythology, a Titan, son of Uranus and Gæa.
- Iberia**.—In ancient geography: (1) The peninsula now comprising Spain and Portugal. (2) The region bounded by the Caucasus Mountains on the north, Armenia on the south, Albania on the east, and Colchis on the west.
- Ibex**.—Ancient name of the steinbok of the Alps. Now according to many eminent zoologists a genus of the goat family. The horns are flat, marked with transverse knots in front, whereas those of the true goat are compressed, keeled in front and rounded behind.
- Ibis**, 4, 229.
Egyptian veneration of the, 4, 229.
"Father John," 4, 229.
Sacred, 4, 229.
Scarlet, 4, 230.
White, 4, 230.
Wood, 4, 230.
- Ibo**.—Portuguese East Africa. An island sea-port and town.
- Ibrahim Pasha**, 10, 362.
- Ibsen, Henrik**.—(1828–1906.) A noted Norwegian novelist and dramatic poet.
- Icarian Sea**.—That part of the Ægean Sea which surrounds Samos and the islands of Icaria.
- Icarus**.—In Greek legend, the son of Dædalus. When, with his father, he took flight from Crete, he soared too near to the sun, and his wings of wax were melted so that he fell into the sea and was drowned.
- Ice**, Effect on rocks and soils, 5, 428.
Expansion of, 5, 160.
- Ice-box**, 1, 24.
- Ice-cutting**, 5, 167.
- Ice hockey**, 6, 113.
polo, 6, 288.
- Iceland**.—An island in the North Atlantic Ocean, bordering on the Arctic circle. It belongs to Denmark, and has an area of about 40,000 square miles, with an estimated population (1901), 78,470. Its chief trade is in fish, cod-liver oil, ciderdown, and live stock. The

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- occupations of the people are fishing, and the breeding of cattle and sheep, which thrive on the natural pastures. The island is subject to earthquakes, especially in the south, where the volcano of Hecla, 70 miles east of Reykjavik, is ever and anon in the throes of eruption. There is considerable trade in seals and whales, and also in ptarmigan and eider-duck. The Icelanders are chiefly of Scandinavian stock. Capital, Reykjavik.
- Iceland moss**, 5, 93.
Spar, 5, 189.
- Icelandic fairy tales**, 3, 154.
- Ice-making**, Artificial, 5, 168.
Brine system, 5, 170.
Direct expansion system, 5, 169.
Linds, machine, 5, 169.
- Ichneumon**.—A Linnæan genus of insects now constituting a family or tribe, Ichneumonidæ, of the order Hymenoptera, section Terebrantia. Many of them are minute, many are large; the species *Rhyssa* being the largest. The abdomen is united to the thorax by a pedicel which is slender. They deposit their eggs in or on—generally in—the bodies, eggs, or larvæ of insects, or on spiders, and are extremely useful to the farmer.
- Ichthyosaurus**, 5, 461.
- Icosahedron**, 7, 255.
- Idaho**.—One of the Western States of the United States of America. Bounded on the north by British America, east by Montana and Wyoming, south by Utah and Nevada, west by Oregon and Washington. It was included in the Louisiana Purchase and became part of Oregon Territory and later of Washington Territory; it was organized as a separate territory in 1863 and was then of great extent, including within its limits the present state of Montana and part of Wyoming. The present boundary was fixed in 1868, and Idaho was admitted as a state in 1890. Much of the surface is mountainous, the principal ranges being the Rocky, Salmon River, and Bitter Root; the leading industries are the mining of gold and silver, and the raising of cattle and sheep, to which the valleys are peculiarly adapted. The capital is Boise City, and other principal towns are Idaho City, Silver City, and Lewiston. Pop. (1900), 161,772.
- Idalium**, or **Idalia**.—A town on the coast of Cyprus, sacred to Aphrodite.
- Ideas**, The value of, 8, 204.
- Ideals**, High, 2, 187.
for a child, Setting up, 2, 243.
the measure of life, 14, 334.
Youth without, 2, 381.
- Identification**, Bank, 13, 49.
- Ides**, 13, 91.
- Idiots under the law**, 13, 131.
- Idleness**, 14, 232.
- "Idler, The."**—By Samuel Johnson, a series of essays first published in 1758–60, in "The Universal Chronicle," a newspaper of the period.
- Idomeneus**.—In Greek legend, a king of Crete, a hero in the Trojan War.
- Idris**, or **Enoch**, 3, 228.
- "Idylls of the King."**—The title of a series of poems by Tennyson, based upon the Arthurian romances.
- Igar**, 13, 102.
- Ignatius Loyola**, 10, 298.
- Igneous rocks**, 5, 432.
- Ignis Fat'uus** (Lat. "vain or foolish fire").—A light that sometimes appears in summer or autumn nights and flits in the air above the surface of the earth, chiefly over marshy places, stagnant pools, and churchyards. It has puzzled scientists, but is undoubtedly hydrogen gas, possessing the power of spontaneous ignition on coming in contact with dry atmospheric air; such gas being generated by the decomposition of animal matter present in the soil.
- Iguana**, 4, 252.
Flesh of the, 4, 252.
Food of the, 4, 252.
Geographical range of the, 4, 252.
Habits of the, 4, 252.
- Ileocæcal valve**, 1, 278.
- Ileum**, 1, 278.
- Ilex**.—A genus of trees and shrubs of the natural order *Ilicineæ*, or holly tribe. It is a native of Southern Europe and Northern Africa. Its wood is very hard and is used extensively for manufacturing purposes.
- Ilex**, 5, 62.
Monticola, 4, 412.
opaca, 4, 412.
- Il Francia**, 9, 224.
- Ilia**, 10, 98.
- Iliacus muscle**, 1, 276.
- Iliad, The**, 3, 367.
- Ilium**.—In ancient geography, a place in Asia Minor. Here Troy was founded about 1341 B. C.
- Illinois**.—One of the Central States of the United States. Bounded on the north by Wisconsin, east by Lake Michigan and Indiana, south by Kentucky, west by Iowa and Missouri. It was settled by the French in 1682; was ceded to Great Britain in 1763, and to the United States in 1783; became part of the Northwest Territory and later of Indiana Territory; was made a separate territory in 1809 and was admitted to the Union in 1818;

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- it was the scene of the Black Hawk War in 1832, and of Mormon troubles in 1844. The surface is generally level, and it is one of the chief states in the production of wheat, corn, and oats; coal and lead are its principal mineral products, and in its cities are large manufactories of various kinds. It is the third state in population; has 102 counties; the capital is Springfield, and the chief city is Chicago, the second city in the United States; other large towns are Peoria, Rock Island, Rockford, Alton, Bloomington, Cairo, Decatur, Elgin, Galena, Jacksonville, Joliet, and Quincy; area, 56,650 sq. miles; pop. (1900), 4,821,550; nicknamed the Sucker State, or the Prairie State.
- Illinois Indians.**—A confederacy of the Algonquin stock, which formerly occupied territory now included in Ill. and parts of Iowa, Mo., and Wis. The principal tribes of the confederacy were the Kaskaskia, Peoria, Cahokia, Tamaroa, and Michigamea. The Illinois were allies of the French, and for this reason the Iroquois, in 1678, waged a long and destructive war against them. In 1769, Pontiac, an Ottawa, who was chief of the confederation, was assassinated by a Kaskaskia Indian, and a war of extermination by the Lake tribes followed. There remain only about 165 Illinois Indians at the Quapaw Agency, Ind.
- Illuminating gas,** 5, 179.
- Illustrating** an occupation for women, 7, 399.
- Illustration,** Instruction in, 1, 205.
- Illustrators,** American, 9, 333.
 Blum, 9, 333.
 Christy, Howard Chandler, 9, 333.
 Gibson, Charles Dana, 9, 333.
 Newell, Peter, 9, 333.
 Rheinhardt, 9, 333.
- Illyria.**—An ancient region east of the Adriatic Sea comprising the modern countries of Albania, Bosnia, Servia, Croatia, and Dalmatia. The Illyrians were the ancestors of the modern Albanians. It was conquered by the Romans, made a province, and later a prefecture.
- Iloilo.**—A seaport, with a good harbor, on the island of Panay, one of the Philippine group. It forms the capital of the populous province of Iloilo, and is with Cebu and Manila the chief ports of the Philippines. In Dec., 1898, after the cession of the Philippines by Spain to the United States, the Spaniards surrendered the town to the Filipino insurgents who were then besieging it. In the following February it was, however, captured by United States troops under Gen. Marcus P. Miller. Pop., about 15,000.
- Ilstley.**—In England, an ancient market town of Berkshire. One of the leading sheep markets of the country.
- Il Sodoma,** 9, 245.
- Imagination,** 2, 176.
 Classification of mental images, 2, 177.
 Dangers to be avoided in training the, 2, 182.
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 held in light esteem by the Puritans, 2, 177.
 Holy lies of the, 3, 9.
 necessary to a child, 2, 180.
 Practical value of the, 2, 180.
 Training the, 2, 176.
- Imitation of Jesus Christ** (*De Imitatione Christi*).—A religious work usually ascribed to Thomas à Kempis.
- Immigration,** 12, 304.
 Chinese, 12, 229.
- Impeachment,** 12, 304.
- Imperial City, The.**—A name commonly applied to Rome.
- Impey, Sir Elijah.**—(1732–1809.) A celebrated English jurist. He was appointed first chief-justice of Bengal in 1774, and was closely identified with Warren Hastings in his work in India.
- Import,** 13, 118.
- Impressionists.**—A term belonging to the modern school of art, which had its source in France, and of which Édouard Manet, the French genre painter, was the founder. Its disciples endeavor to free themselves from the trammels of artistic tradition, and to portray nature in a fresh and original manner. They avoid the conventionalities of lighting, composition, etc., which have been accepted by the art of the past, and strive to render with truth their impressions of nature. They are partly at one with the Pre-Raphaelites; but while the latter studied nature in a detailed and analytical manner, the former portray only such of her salient features as are visible in a cursory examination, and these they render usually by brush-work of the freest, slightest, and loosest description. They are further separated from the Pre-Raphaelites by the absence of intellectual or emotional interest in their pictures. Care for beauty of color, form, or expression is hardly visible in their work; indeed, they more often fall into the depths of ugliness and vulgarity.
- Impressment.**—The act of compelling persons to enter the public service, usually applied to the seizure of sailors for service on naval vessels. Great Britain has always claimed the

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right to levy land and naval forces in time of war by compulsory process. The exercise of this claim was among the causes that led to the War of 1812. Great Britain refused to allow the right of her seamen to change their allegiance by naturalization, and insisted upon the right to search neutral vessels, and decide by her own officers, who among the crew of such neutral vessels were British subjects. Many American sailors were in this way impressed into the British service, although by the Treaty of Ghent, Great Britain did not relinquish this claim, it has long since been abandoned as far as U. S. vessels are concerned.

Imprisonment for debt, 10, 381.

Impudence, Admission of parents' faults, 2, 308.
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Impulse, Discrimination between right and wrong, 2, 225.

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Inauguration of the President, 12, 444.

Incantations, Power of, 10, 54.

Incarnations of Vishnu, 10, 9.

Incas, 11, 39.

Inchbald, Mrs. Elizabeth Simpson.—(1753-1821.) An English actress, dramatist, and novelist.

Inclined planes, 5, 263.

Income tax, 12, 305; 13, 118.

Independence, Declaration of, 11, 84.

Hall, 11, 107.

War of, 11, 66.

Indestructability of matter, Law of, 5, 170.

India.—The great central peninsula of southern Asia, bounded on its northern, landward base by the Himalayas and the rivers Indus and Brahmaputra. Politically, it consists of the British provinces of Bengal, Bombay, Burma, the Northwest Provinces and Oudh, etc., embracing (1901) an area of 964,993 square miles, with an estimated population of about 231,085,132. It further embraces the great native and feudatory states, subordinate in the main to Britain as the suzerain power, and having an area of 755,695 square miles, with a population of about 63,181,569. The supreme authority, both executive and legislative, is vested in the governor-general in council, under the British Secretary of State for India, who is responsible to Parliament. The seat of local government is Calcutta. Bombay and Madras are styled Presidencies, and enjoy a certain precedence, while the Northwest Provinces and Bengal are under a lieut.-governor, and Assam and the Central Provinces are under commissioners. Some of the native or feudatory states pay tribute to the supreme

government. The Hindoo religion is that of three-fourths of the population (207 million); the Mohammedans number about 58 million; the Buddhists, 7 million; the Anamistics, 9 million; and the Christians about 2½ million. The chief products are rice, wheat and other food grains, sugar, cotton, tea, oil-seeds, indigo, tobacco, and opium: hides and skins, wool, jute, spices, dyes and tans are also among the exports. Among the principal cities of India are Calcutta, Bombay, Madras, Haidarabad, Lucknow, Benares, Delhi, Mandalay, Cawnpore, Bangalore, Lahore, Allahabad, Agra, Patna, and Poona. India has now in operation about 24,000 miles of railroad.

India, Conquest of, 11, 15.

End of the East India Company, 11, 16.

France in, 11, 24.

History of, 10, 177.

Indian Affairs, Bureau of, 12, 398.

Attempts to civilize, 2, 201.

Bean, 4, 419.

Club exercises, 6, 26.

Cress, 5, 69.

(1) Silk curtains, 1, 36.

(2) turnip, 5, 16.

Indiana.—The name signifies "land of Indians"; one of the Central States of the America Union. Bounded on the north by Michigan and Lake Michigan, east by Ohio, south by Kentucky, west by Illinois. It was settled by the French at Vincennes and elsewhere in the 18th century; was ceded to Great Britain in 1763, and to the United States in 1783; became part of the Northwest Territory, was made a separate territory in 1800, and was admitted to the Union in 1816. The surface is generally level, and agriculture is the chief industry; wheat and corn are the staple products. The capital is Indianapolis, which is also its largest city; other flourishing towns are Evansville, Fort Wayne, Jeffersonville, Logansport, Madison, Elkhart, New Albany, Richmond, Terre Haute, South Bend, Vincennes. Area, 36,350 sq. miles; pop. (1900), 2,516,462; called the Hoosier State.

"Indiana, The," 12, 306.

Indianapolis.—The capital city of Ind.; it is an important railway center and has pork-packing and milling industries. Pop. (1900), 169,164.

Indian Mutiny, or Sepoy Mutiny.—The revolt against British authority in India, 1857-58.

Indian Mythology, American, 10, 128.

Indian Ocean.—That part of the ocean lying between Asia, Africa, Australia, and the Malay Archipelago. The Bay of Bengal and the Arabian Sea are its chief arms.

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Indian Territory.—One of the western territories belonging to the United States of America. In 1906, it was merged with Oklahoma into the state of Oklahoma. Bounded on the north by Kansas, east by Missouri and Arkansas, south by Texas, west by Oklahoma. The region acquired was part of the Louisiana Purchase in 1803 and part from Mexico in 1845; in 1834 it was set apart for the Indians who were removed from their original home; in the Civil War the Indians sided with the Confederates and it was necessary to send a force of cavalry to subdue them. Prior to 1906 the territory was unorganized; the Indian tribes—Cherokees, Choctaws, Chickasaws, Creeks, and Seminoles—conducted their own affairs. The surface is generally level and rolling, and herding is the chief industry; Tahlequah, in the Cherokee land, is the chief town; area, 31,400 sq. miles: pop. (1900), 392,000.

Indians, 12, 306.

Hopi, 10, 128.

Indicator bird, 4, 194.

Indigestion, Diet for, 6, 14.

Treatment of, 1, 328.

Indigo, 5, 248.

Indigo bunting, 4, 190.

Indigo plant, 5, 62.

Indo-China.—Possessions of France in Farther India, on the Annamese peninsula. They include the French dependencies of Cochin-China, Tonquin, Annam, and Cambodia, with a united area of about 303,000 square miles, and an estimated population of 22,680,000. Since 1887, the above possessions have been united into a Customs Union, and their affairs are administered under a governor-general. Cochin-China and Cambodia were acquired in 1801-62, and Tonquin, Laos, and Annam in 1884. The chief products are rice, betel, tobacco, indigo, peppers, cinnamon, dyes, rubber, and medicinal plants. Cotton, sugarcane, and the silk tree are also grown, while there is also much valuable timber and considerable mineral wealth. Railway communication is now being projected.

Indo-European languages, 8, 354.

Indore.—(1) In India, a native state under the control of the Central India Agency. (2) The capital of Indore. Pop., about 93,000.

Indorsement, 13, 119.

Indra, 10, 22.

The love of, 10, 24.

Indus River.—One of the chief streams of India, has its source in the Himalayas of Tibet. It flows at first northwest through Kashmir, then turns south, and passes through

the provinces of the Panjab and Sind, into the Arabian Sea, below the city of Hyderabad. Its principal affluents are the Sutlej, Jhelum, Chenab, Ravi, and the Kabul. Its entire length is about 1,800 miles: but it is navigable from its mouth only as far as Rori, in the northern part of Sind.

Industry, Child to do work he likes best, 2, 330.

be encouraged to help, 2, 323.

Cultivate artistic sense in child, 2, 325.

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"Infanta Maria Teresa," The, 12, 307.

Infants, Bathing, 1, 299.

Infectious Diseases, 1, 346.

Disinfection, 1, 302.

Inference, Animals capable of, 2, 167.

defined, 2, 166, 167.

Inferior maxillary bones, 1, 273.

Infusoria, 4, 384.

Ingalls, John James, 12, 307.

Ingelow, Jean.—(1820-1897.) A noted English poet and novelist.

Ingersoll, Genevra, Fairy tales, 3, 13.

Ingersoll, Robert G., 12, 205.

Ingham, Col. Frederic.—The pseudonym of Edward Everett Hale, author of the "Ingham Papers," etc.

"Ingoldsby Legends."—A collection of remarkable legends in prose and verse, supposed to have been found in the family chest of the Ingoldsby family and related by Thomas Ingoldsby, a pseudonym assumed by the Rev. Richard Harris Barham (1788-1845). The legends first appeared in "Bentley's Magazine," London, and attracted much notice for their originality of design and diction, and for the quaint illustration and musical character of their verse. Of the work as a whole it has been said that "such drollery invested in rhyme has never been so amply or so felicitously exemplified since the days of Hudibras."

Ingraham, Duncan Nathaniel, 12, 29.

Ingraham, Joseph Holt.—(1809-1860.) An American clergyman and novelist; author of "The Prince of the House of David."

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- Ingrain carpet**, 1, 33.
- Ingres, Jean Auguste Dominique**, 9, 265.
- Injuries, First aid in**, 1, 352.
- Ink**, Drawing, 7, 268.
 Invisible, 5, 222.
 Proper kind to use, 1, 90.
 Sympathetic, 5, 222.
- Inkerman**.—In Russia, a town in the Crimea; the scene, Nov. 5, 1854, of the defeat of the Russians by the English and French. The town is now in ruins.
- "In Memoriam."**—An elegiac poem, written by Alfred Tennyson and published in 1850; a lament for his friend, Arthur Henry Hallam.
- Inness, George**.—(1825-94.) Distinguished American painter, 9, 331.
- Inness, George**, Early marriage of, 1, 236.
 Work of, 9, 331.
- Innocent III., Pope**, 10, 260.
- Innocuous Desuetude**, 12, 307.
- Innsbruck, or Innspruck**.—In Austria, the capital of Tyrol. Noted for the picturesqueness of its environment. The scene of severe warring between the Tyrolese and the Bavarians in 1809.
- Inquisition, The**.—An ecclesiastical court, officially styled the Holy Office, for the suppression of heresy and punishment of heretics. From the original establishment of Christianity as the religion of the Roman Empire, laws existed, more or less severe, for the repression and punishment of dissent from the national creed, but the Inquisition proper, as a recognized court for this purpose was really not organized until Emperors Theodosius and Justinian appointed officers called "inquisitors" whose special duty was to discover, and prosecute before the civil tribunals, offenses of this class. Heresy at this period was regarded as a crime against the State as well as the Church. Under Innocent IV. (1248) it gathered strength and its powers were vested entirely in the then recently established Dominican Order. It then became a general, instead of, as formerly, a local tribunal, and was introduced in succession into Italy, Spain, Germany, and the southern provinces of France. In procedure: The party, if suspected of heresy was liable to arrest and detained in prison, only to be brought to trial when it seem fit to his judges. The proceedings were conducted secretly, and the accused was liable to be put to torture to extort a confession of his guilt. The punishments of guilt were death by fire, death on the scaffold, imprisonment in the galleys for life or for a limited term, forfeiture of personal property, civil infamy, and, in minor cases, retraction and public penances.
- Inquisition**, 10, 298.
 in Holland, 10, 299.
- Inquisitiveness**, Cause of, 2, 301.
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- Insalivation of food**, 1, 276.
- Insane persons under the law**, 13, 131.
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- Insectivora**, 4, 11.
- Insects**, 4, 319.
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- Insects, Collecting and preserving**, 4, 311.
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 Special rules, 4, 313.
- Insolvent**, 13, 39, 119.
- Inspiration of daily life**, 14, 1.
- Instinct, Animal**, 2, 2.
 defined, 2, 167.
 Growth into love, 2, 1.
 Habitual inference, 2, 167.
 of self-preservation, 2, 1.
- Institute of France**, established by the French directory in 1795 to take the place of the academies suppressed by the convention two years previously. It now consists of the members of the L'Académie Française, L'Académie des Inscriptions et Belles-Lettres, L'Académie des Sciences, L'Académie des Beaux-Arts, and L'Académie des Sciences Morales et Politiques. Each academy has its own separate organization and work, and participates besides in the advantages of the common library, archives, and funds. The members are paid each a sum by the government annually, and the government also votes a yearly amount for the maintenance of the institute. Membership in the Académie Française is limited to forty Frenchmen.
- Insurance**.—Insurance is a contract under which one party, called the insurer, agrees, in consideration of a sum of money called the premium, to pay a larger sum of money to another party, called the insured, on the happening of

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- a designated contingency. Insurance has sometimes been said to be akin to gambling, but it is really the opposite. The gambler seeks excitement and gain by the artificial manufacture of hazardous speculations. The prudent man resorts to insurance in order to secure peace of mind and immunity from the loss which might arise from contingencies beyond his control. The gambler creates or exaggerates risks; the insurance office equalizes them.
- In round numbers, the total amount of life insurance written by the different insurance companies of the world is, \$12,000,000,000. Of this sum \$5,500,000,000 is placed in the United States. Between the years 1880 and 1890 there was \$2,500,000,000 new life insurance written in this country, and but \$1,000,000,000 in the whole British empire.
- Insurance**, 13, 119.
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- Interior department**, 12, 307.
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- International**, African Association, 11, 23.
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- Interstate Commerce**, 12, 309.
- Intestacy**, 13, 121.
- Intestines**, The, 1, 278.
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- In the Land of Souls**, North American Indian fairy tale, 3, 157.
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- Inventors**, How to succeed by Edison, 5, 369.
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- Inventory**, 13, 121.
- Inverness**.—(1) A county of Scotland, noted for its beautiful scenery. (2) A seaport and the capital of the county of Inverness; an important trade center.
- Invitation**, Form of, 1, 92.
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- Invert-sugar**, 5, 236.
- Investiture**, Right of, 10, 260.
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- Iobates**, King of Lydia, 10, 111.
- Iodic acid**, 5, 189.
- Iodine**.—One of a group of four non-metallic elements to which the term Halogens is applied. It derives its name from iodes (Gr.) "violet-like" in consequence of its magnificent purple color when in a state of vapor. It fuses at 225°; is slightly soluble in water, and dissolves readily in watery solutions of iodide of potassium, and of hydriodic acid and in alcohol and ether. Iodine vapor is the heaviest of all known vapors, its specific gravity being 8.716.
- Iodine**, Properties of, 5, 189.
 Starch test for, 5, 189.
- Iodoform**.—A solid compound similar to chloroform and is produced by the action of iodine with alkalis or alkali carbonates on alcohol. It is an anesthetic, an antiseptic, and is used in surgical dressings.
- Iodoform**, 5, 229.
- Ion**, 1, 201.
- Ion**.—In Greek mythology the ancestor of the Ionians.
- Ionian**.—A fertile country which according to Ptolemy extended from the River Hermus to the River Mæander along the coast of the Aegean Sea. In ancient times it was the most flourishing country in Asia Minor and received its name from the Ionians, who according to the mythological account derived theirs from Ion, the son of Apollo by Creusa, a daughter

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- of a king of Athens Ionia reached a high point of prosperity; agriculture and commerce flourished, and great cities arose of which Ephesus, Smyrna, Clazomenæ, Erythræ, Colophon, and Miletus were the most celebrated. The country was reduced by the kings of Lydia, and in 557 B. C. passed under the sway of the Persians. After the battle Mycale (479 B. C.) the Ionians entered into an alliance with Athens upon which they shortly after became dependent. After the Peloponnesian War they were subject to the Spartans; in 387 B. C. again to the Persians until the time of Alexander the Great. It was added to the Roman empire in 64 B. C. by Pompey, and in later times was so ravaged by the Turks that little of its former greatness is now left.
- Ionian Islands** acquired by England, 10, 360.
- I.O.U.**, Form of an, 13, 126.
- Ios.** — An island of the Ægean Sea; the modern Nio; a possession of Greece.
- Iowa.** — One of the Northwestern States of the United States. Bounded on the north by Minnesota, east by Wisconsin and Illinois, south by Missouri, west by Nebraska and South Dakota. It was part of the Louisiana Purchase and was included, successively, as boundaries were changed, in the territories of Missouri, Michigan, and Wisconsin; the first permanent settlement was made at Burlington in 1833; population grew rapidly by immigration and Iowa was made a separate territory in 1838 and was admitted to the Union in 1846. The surface is mostly level and the state is largely devoted to agriculture, the cereals being its chief products; coal and lead are mined in considerable quantities. The capital is Des Moines, and other important towns are Burlington, Council Bluffs, Clinton, Davenport, Dubuque, Cedar Rapids, Ottumwa, Keokuk, and Sioux City; area, 56,025 sq. miles; pop. (1900), 2,231,853; nicknamed the Hawkeye State.
- "Iowa," **The**, 12, 310.
- Ipecacuanha.** — The dried root of *Cephaelis Ipecacuanha*, a small shrubby plant, a native of Brazil, the United States of Colombia, and other parts of South America. There are three varieties, the brown, red, and gray — differences due to nothing more than age, place of growth, or method of drying. It is emetic, purgative, diaphoretic, and is much used in medicine. It is in the bark of the root that the active principle (emetine) lies, and in good specimens it amounts to 14 or 16 per cent.
- Ipecacuanha**, 5, 62.
- Medicinal properties of, 5, 62.
- Iphigenia**, in Greek mythology the daughter of Agamemnon and Clytemnestra, whose story has been dramatized by Euripides, as well as by Racine and by Goethe. The story, as related in one legend, is that Agamemnon, as he was about to sail against Troy, killed a favorite deer belonging to Artemis in Aulis, and this so offended that goddess that when the seer Calchias was consulted, on the matter of propitiating her, he told Agamemnon that the only means of doing so was to sacrifice his daughter Iphigenia. This Agamemnon proceeded to do, but meanwhile Artemis carried Iphigenia away in a cloud to Tauris and made her a priestess in her temple. While at Tauris, Iphigenia saved her brother Orestes from being put to death, he having come hither with the design of carrying off the image of Artemis or Diana.
- Ipswich.** — (1) In England, the capital of Suffolk. The birthplace of Wolsey. (2) A port of Queensland, Australia. (3) A river port in Essex County, Mass.
- Iravat**, 10, 10.
- Irawadi, or Irrawaddy.** — The principal river of Burma; length about 1,500 miles; it flows into the Bay of Bengal.
- Iredell, James.** — (1751-1799.) He was justice of the U. S. Supreme Court (1790-99).
- Ireland.** — An island forming part of the United Kingdom of Great Britain. In the north and west it is washed by the Atlantic Ocean, on the south by St. George's Channel, and on the east by the Irish Sea. The island is divided into four provinces — Leinster, Munster, Ulster, and Connaught. In Ulster, the northern province, manufacture is conducted on a large scale, while in the three remaining provinces the population is dependent on agriculture. In religion, Ulster is Protestant, while Leinster, Munster, and Connaught, are Roman Catholic. Pop. (1901), 4,456,546.
- Ireland**, National flower of, 1, 200.
- Ireland, John.** — Born in Ireland, 1838. A Hiberno-American Roman Catholic prelate. He emigrated to America in 1849 and was ordained bishop of St. Paul in 1884 and archbishop in 1888.
- Irem**, city of columns, 3, 231.
- Iriarte, Tomas de**, Spanish writer, 3, 202.
- Iris**, 5, 29.
- Persian, 5, 30.
- Irish** elk, 5, 467.
- fairy tales, 3, 131.
- moss, 5, 103.
- point lace curtains, 1, 35.
- Irish Sea.** — A body of water lying between England and Ireland; it is connected with the At-

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- lantic Ocean by the North Channel on the north and by St. George's Channel on the south.
- Irish setter dog**, 4, 20.
- Iron**, Cast, 5, 218.
 Characteristics of, 5, 436.
 Galvanized, 5, 210.
 Group of chemical elements, 5, 217.
 Manufacture, 5, 217.
 Pig, 5, 218.
 production, Statistics of, 13, 336.
 puddling, 5, 220.
 pyrites, 5, 221, 437.
 Salts of, 5, 221.
 slag, 5, 219.
 smelting, 5, 217.
 Spiegel eisen, 5, 220.
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- Iron ores**, 5, 436.
 Argillaceous ores, 5, 437.
 Bog ore, 5, 437.
 Brown hematite, 5, 436.
 Hydrated, 5, 437.
 Limonite, 5, 437.
 Magnetite, 5, 436.
 Pea, 5, 437.
 Red hematite, 5, 436.
 Spathic, 5, 437.
 Specular, 5, 436.
- Iron City, The**.—A name applied to Pittsburg, Pa., because of its iron manufactures.
- Iron Cross**.—Prussian order of knighthood instituted March 10, 1813, by Frederick William III. It is conferred for distinguished services in war and is made of iron with silver mountings.
- Iron Mountain**.—An eminence situated in eastern Mo., 1,075 ft. high, noted for its deposits of iron ore.
- Ironclad oath**, 12, 346.
- Ironing clothes**, 1, 30.
 outfit, 1, 31.
 a sheet, 1, 31.
 table, 1, 31.
- Ironton**.—A city in Ohio, situated on the Ohio River, the center of an iron district. Pop. (1900), 11,868.
- Iroquois Indians**.—One of the great families of American aborigines, composed of many tribes speaking languages of a common origin. In early days most of the Iroquois dwelt in the region of the Great Lakes, in what are now the Canadian provinces of Ontario and Quebec, and the states of N. Y. and Pa. A small group, the Tuscaroras, occupied the region about the head waters of the Roanoke and Neuse rivers, and the branches of Cape Fear River, in N. C. and Va. Intellectually and physically they were the foremost of American Indians. They were almost constantly at war with neighboring tribes or with the whites, and in the struggle for American independence they sided with great Britain. They now have reservations in the Dominion of Canada.
- Irreverence**, Cause of, 2, 300.
- Irrigation**.—The artificial watering of arid land. It has been practised in Egypt and the East from remote ages, and large areas of formerly useless land in the U. S. have been by this means reclaimed and rendered tillable and productive, notably in Cal., Col., Utah, Wyo., Nev., Ida., Mont., Ariz., and N. Mex. Much of this has been done by the states, and aid has been given by the Federal Government.
- Irving, Sir Henry**.—The adopted or stage name of John Henry Broadribb, a British actor who has long been associated with Miss Ellen Terry in the histrionic art. Sir Henry was born in 1838, and his career lasted about 45 years, and after 1871 he was connected with the Lyceum Theater, London. His earliest successes were as "Mathias," in "The Bells," and later in the personations of Louis XI., Charles I., Hamlet, Macbeth, Richard III., Wolsey in Henry VIII.—his character delineation of whom has manifested the highest qualities of the actor's art. He achieved successes in the following plays: "Faust," "The Corsican Brothers," "The Lyons Mail," in Tennyson's "Becket," "Othello," "Merchant of Venice," and in "Richelieu." Irving was knighted in 1895. He has published several addresses on the drama, and on acting. He died in 1906.
- Irving, Washington**.—Author; sketch of, 8, 293.
- Is Santa Claus True?** 2, 351.
- Isabella of Bavaria**, 10, 406.
- Isabella of Castile**, 10, 280.
- Ischia**.—An island in the Bay of Naples, a few miles from the city of Naples, to which it belongs. Although volcanic in formation the island is extremely fertile; it is noted for its warm baths.
- Ishmael**, 3, 244.
- Ishpeming**.—A city in Michigan, noted for its iron industry. Pop. (1900), 13,255.
- Isinglass**, 4, 287.
- Islam**, 10, 237.
- Island No. 10 (Tenn.)**, Capture of, 12, 30.
- Isles of Shoals**.—A group of small islands off the coast of N. H., much frequented as summer resorts.
- Isocrates**.—(436-338 B. C.) One of the ten Attic orators.

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Israel, Kingdom of, **10**, 184.

Lost tribes of, **10**, 184.

Israels, Josef.—Born, 1824; a noted figure painter of the Belgian school, **9**, 329.

Iswara, **10**, 19.

Italian fairy tales, **3**, 53.

Grayhound, **4**, 19.

Italic letters, Alphabet in, **7**, 273.

Italy.—A kingdom of southern Europe, lying to the south of Switzerland and the Tyrol, and extending as a boot-shaped peninsula into the Mediterranean Sea, west of the Adriatic. With Sicily and Sardinia, it has a total area of 110,646 square miles, with a population of 32 millions. In the king (Victor Emmanuel III., born, 1869 and succeeded Humbert I.) is vested executive power under the direction of his ministers. The legislative power is vested in the king and Parliament, comprising a Senate Chamber of Deputies. The Roman Catholic Church is the dominant one, but its power is now in many ways subordinate to the civil authority, since the suppression of the Pope's temporal dominion. Rome is the capital of United Italy (pop., 512,423), but Naples (pop., 544,057) is now the largest city. Milan, Turin, Palermo, Genoa, and Florence rank next in order. Italy has foreign dependencies in northeastern Africa, and on the coast of the Red Sea (the colony of Eritrea). The financial and economic condition of Italy is sound, while it has a small army and a considerable navy, with a large mercantile marine. Its exports consist of silk, wine, olive oil, hemp and flax, meats and hides, rice, eggs, sulphur, dyeing and tanning stuffs, together with marble, zinc, iron, copper, and tin ores. She has a total railway mileage of 10,000 miles. Education is compulsory for children between six and nine, and there are a number of notable universities. There is considerable emigration annually from Italy.

Italy benefited by the Crusades, **10**, 277.

Free cities of, **10**, 277.

History of, **10**, 277.

Struggle for the liberation of, **11**, 1.

Treaty with Abyssinia, **11**, 21.

under Theodoric, **10**, 234.

Italy, Victor Emmanuel III., King of.—Born, 1869, only son of King Humbert I., who was assassinated at Monzo, Italy, July 29, 1900, by an Italian anarchist known at Paterson, N. J. as Gaetano Bresci. The present king succeeded to the Italian throne on the death of his father, and in 1896 married Hélène, a daughter of Nicholas, Prince of Montenegro. He is known to his countrymen both as a

soldier and a sailor, and has always taken a keen interest in Italy. His mother was the Princess Marguerite of Savoy, born in 1851 and married in 1868 Humbert, Prince of Piedmont (afterward [1878] king of Italy).

Itasca, Lake.—A small lake in Minn.; the source of the Mississippi; about 1,457 ft. above sea-level.

Ithaca.—A city in N. Y., the seat of Cornell University. Pop. (1900), 13,136.

Ithaca.—Off the west coast of Greece, one of the Ionian Islands; noted as the reputed home of Ulysses.

Iuka (Miss.), **Battle of**, **12**, 30.

Ivan.—The Russian form of John; the name of several Russian czars. Ivan III. (1438–1505) was the founder of the Russian empire; at first only Duke of Moscow, but succeeded in driving the Tartars out of Russia, and subjecting a number of Russian principalities to his own sway. Through his marriage European civilization entered Russia. Ivan IV. (1529–84) did much for the advancement of Russia in art and commerce and greatly extended its boundaries by force of arms. He was also surnamed "the cruel," and merited it by his deeds, among which was the slaughter of 60,000 persons at Novogorod in six weeks because of a plot to deliver up the city and surrounding territory to the king of Poland.

Ivan the "Great," **10**, 328.

Ivan III. of Russia, **10**, 328.

Ivan IV. the "Terrible," **10**, 328.

Ivan VI. of Russia, **10**, 434.

"**Ivanhoe**."—A novel by Sir Walter Scott, published in 1820.

Ives, Henry S., **14**, 289.

Ivory.—The hard substance, not unlike bone, of which the teeth of most mammals chiefly consist, the dentine or tooth-substance which in transverse sections shows lines of different color running in circular arcs. It is used extensively for industrial purposes and is derived from the elephant, walrus, hippopotamus, narwhal, and some other animals. The ivory of the tusks of the African elephant is held in the highest estimation by manufacturers; the tusks vary in size, ranging from a few ounces in weight to 170 pounds. Holtzapffel states that he saw fossil tusks on the banks of rivers of northern Siberia which weighed 186 pounds each. Ivory is simply tooth-substance of exceptional hardness, toughness, and elasticity, due to the firmness and regularity of the dentinal tubules which radiate from the axial pulp-cavity to the periphery of the tooth.

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Ivory-billed woodpecker, 4, 179.
Ivory Coast.—A part of the coast of Upper Guinea, Africa. A possession of France.
Ivory Palm, 5, 6.
Ivy, Common, 4, 478.

Ixion.—According to Greek mythology, a king of the Lapithæ, and father of the Centaurs. For certain offenses he was punished in the lower regions, by being bound to a wheel destined to revolve forever.

J

Jack.—A small flag having only the union, without the fly, and is usually hoisted at the bowsprit cap.
Jack-ass, 4, 15.
Jack and the Bean-stalk, English fairy tale, 3, 112.
Jack Cade's Rebellion, 10, 274.
Jack-daw, 4, 147.
Jack-in-the-pulpit, 5, 16.
Jack-o'-lantern, 2, 131.
Jack-rabbit, 4, 43.
Jack-screw, 5, 263.
Jack-snipe, 4, 132.
Jack the Giant-Killer, English fairy tale, 3, 116.
Jackson.—(1) A city in Mich., situated on the Grand River, noted for its flourishing manufactures and trade. Pop. (1900), 25,180. (2) The capital city of Miss., on the Pearl River. A cotton emporium. The scene of a battle in the Civil War, in which the Confederates suffered defeat from the Federals commanded by Gen. Grant (1863). Pop. (1900), 7,816. (3) A city in Tenn., situated on the Forked Deer River. Its great export is cotton. Pop. (1900), 14,511.
Jackson, Andrew, 11, 276.
 Election of, 11, 270.
 Presidency of, 11, 281.
 referred to, 14, 13, 128, 261.
Jackson (Miss.), Capture of, 12, 30.
Jackson, Charles Thomas.—Born at Plymouth, Mass., 1805; died at Somerville, Mass., 1880. A noted geologist and physician. He was appointed state geologist of Me. in 1836, and of R. I. in 1839, and state surveyor of mineral lands of Mich. in 1847. He constructed in 1834 a telegraphic apparatus similar to that patented by Morse, and in 1852 received a prize from the French Academy for the discovery of etherization.
Jackson, Henry R., 12, 30.
Jackson, James S.—Born in Ky.; killed at the battle of Perryville, Ky., Sept. 8, 1862. He entered the Union army in 1861, as colonel of the 3d Ky. cavalry, and in 1862 was promoted to brig.-gen.; he fell at the head of his brigade, as above.

Jackson Mrs. (HELEN MARIA FISKE, later MRS. HUNT; *Pseudonym* H. H.).—(1831-1885.) A noted poet, novelist, and writer of miscellaneous works. She was special commissioner in 1883 to examine into the condition of the Mission Indians of Cal.
Jackson, Richard, 14, 149.
Jackson, Thomas Jonathan ("Stonewall").—Soldier; sketch of, 12, 31.
Jackson, Thomas Jonathan, 12, 31.
Jacksonville.—(1) A city in Fla., on St. John's River, noted as a railway, steamboat, and commercial center. Its chief exports are grain and fruit. It is also much frequented as a winter health-resort. Pop. (1900), 28,429. (2) A city in Ill., the seat of Ill. College and other educational and charitable institutions. Pop. (1900), 15,078.
Jacobi, Abraham.—Born in Westphalia, 1830. A German-American physician. He came to the U. S. in 1853 and was appointed professor of diseases of children in the New York Medical College in 1861, in the medical department of the University of New York (1867), and in the College of Physicians and Surgeons (1870).
Jacobi, Mary Putnam.—A physician of New York. She was the first female graduate of the New York College of Pharmacy. She has been professor of *materia medica* in the Female Medical College, New York, since 1877. She was born in London, 1842.
Jacobin Club, 10, 343.
Jacobins, The, were members of a political club organized during the French Revolution, of which Robespierre was the dominant leader. The club received its name from the Church of St. Jacques (Jacobus), Paris, in which it held its earliest meetings. It was originally composed of moderate men of the type of Talleyrand, Mirabeau, La Fayette, and others, but in the delirium of the time they withdrew, and Robespierre became its chief, under whom the Jacobins for a time dictated every government measure. With Robespierre's downfall, in 1794, the club was suppressed, though not until it had committed

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many revolutionary acts of the wildest character, for terror was the Jacobin's weapon, and their opponents, the Girondists, were powerless to intervene.

Under the National Government the public credit fell to a low ebb, and the currency became debased. In our Revolutionary times, there were naturally great disturbances of commerce and a bad condition of the finances. To seek to mend this state of things a disastrous recourse was had to the issue of paper money, and hence the clamorers for this "cheap money," which brought into vogue the term "not worth a continental," were at the era likened to the French Jacobins, who desired to make bad money pay for good.

Jacobins, 10, 344.

Jacobite Rebellion in Scotland, 10, 338.

Jacotot, Jean Joseph.—(1770-1840.) A French soldier, a mathematician, French lecturer on literature at Louvain and director of the Military Normal School. He was the inventor of the "Universal Method" of education.

Jacques, Bonhomme.—A national name for the French peasantry.

Jaffa, or Joppa.—A town on the seacoast of Syria, at the head of the Mediterranean Sea, 33 miles from Jerusalem. Pop., 17,500.

Jagellon dynasty, 10, 307.

Jaguar, 4, 73, 74.

Characteristics of the, 4, 74.

Food of the, 4, 74.

Fur of the, 4, 74.

Geographical range of the, 4, 74.

Jainas.—A sect of Hindus, forming on account of their wealth and influence an important division of the people of India. They number nearly 400,000. They are the followers of Jina the Victorious.

Jalap, 5, 62.

Jamaica.—A British island of the Greater Antilles, West Indies, 90 miles south of Cuba, in the Caribbean Sea. Capital, Kingston. It is 144 miles long and 50 miles in extreme width. Pop. about 750,000, of which 500,000 are blacks and only 20,000 whites. The remainder are colored and coolies.

Jamaica taken from Spain, 10, 325.

Jamaica Bay.—An inlet of the Atlantic, south of Long Island, N. Y.

James.—A river in Va., flowing into Chesapeake Bay, near Old Point Comfort. It was an important strategic point in the Civil War.

James I.—(1394-1437.) King of Scotland (1406-37).

James II.—(1430-1460.) King of Scotland (1437-60).

James III.—(1451-1488.) King of Scotland (1460-88).

James IV.—(1473-1513.) King of Scotland (1488-1513).

James V.—(1512-1542.) King of Scotland (1513-42).

James I.—(1566-1625.) King of England, Scotland, and Ireland (1603-25), 10, 319.

James II.—(1633-1701.) King of England, Scotland, and Ireland (1685-88), 10, 326.

at the Battle of the Boyne, 8, 17.

Treatment of the colonists by, 11, 47.

James, Army of the, 12, 42.

James Bay, 11, 47.

James, Edmund Storer.—Born at Sheffield, Mass., 1807; died at New York, 1876. He was bishop of the Methodist Episcopal church in America.

James, George Payne Rainsford.—(1801-1860.) An English historical writer and novelist.

James, Henry.—Born at New York, 1843. A noted novelist, son of Henry James. His principal works include "Transatlantic Sketches," "A Passionate Pilgrim," "The American," "The European," "Daisy Miller," "Confidence," "Portrait of a Lady," "The Bostonians," "The Real Thing," etc.

James, Hon. Thomas L., on a college education, 8, 74.

James, William, 14, 71.

quoted on memory, 2, 164.

observation, 2, 157.

reason, 2, 168.

James River explored by Captain John Smith, 11, 41.

Jameson, Leander Starr, M. D., or Doctor "Jim," was a medical practitioner at Kimberley, capital of Griqualand West, Cape Colony, who as administrator of the British South Africa Company, made an attack upon Matabeleland in 1893. In 1895 he made an unsuccessful attack on Johannesburg. He was sent by President Krüger to England for trial, where he was sentenced to 15 months' imprisonment, but was released in Dec., 1895, on account of ill health.

Jameson, Mrs. (ANNA BROWNELL MURPHY).—(1794-1860.) A British author and writer on historical and art subjects.

Jamesone, George, 9, 275.

Jamestown.—(1) Situated in Va., on the James River, and was the first permanent English settlement in the U. S. in 1607. It was burned in Bacon's Rebellion in 1676. The only relics of it now are the tower of the church and a few tombs. (2) A city in N. Y., noted as a summer resort. Pop. (1900), 22,892.

Jamestown (Va.), Battle of, 11, 107.

Captured and destroyed, 11, 43.

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Jami (*ja-mē'*).—(1411-1492.) A celebrated Persian poet.

Janesville.—A city in Wis., situated on the Rock River. Pop. (1900), 13,185.

Janiculum.—The highest of the "seven hills of Rome" is situated on the right bank of the Tiber, opposite to the Capitoline and the Aventine. It is 276 feet above the sea.

Janissaries, 10, 287.

Janouschek (*yä'nou-shek*), **Fanny**.—A Bohemian tragic actress, was born at Prague in 1830. She has appeared in all the European centers and has made several professional visits to America. Died in 1906.

Jansenists.—A school of Roman Catholic followers of Cornelis Jansen (1585-1638) a Dutch Roman Catholic theologian.

January, 13, 102.

Janus, 10, 104.

Temple of, 10, 104.

Japan.—Sometimes called Nippon, "Land of the Rising Sun," an Asiatic empire in the Northern Pacific, adjacent to China, from which it is separated by the Sea of Japan and the straits of Korea. It embraces five large islands, Honshiu (the mainland, on which is the capital Tokio or Yedo), Yezo, to the north of the latter, Shikoku and Kiushiu, to the south of it, together with a number of smaller islands. Formosa (Taiwan) and Hokoto (the Pescadores) were ceded in 1895 by China, in accordance with the treaty of Shimonoseki. The area of the empire (without Formosa, 13,458 sq. miles, and the Pescadores, 86 sq. miles) is 147,655 square miles, with an estimated population of 44 millions. The population of Formosa is 2,745,138, and that of the Pescadores, 52,405. The capital Tokio or Tokyo had a population in 1898 of 1,440,121. Osaka is the next largest city, with a population of 821,235. The two chief religions are Shintoism and Buddhism, besides numerous Roman Catholics, adherents of the Greek Church, and Protestants. There is no state religion and no state support. Prior to 1889 the country was an absolute monarchy, but in that year a new constitution was promulgated. In the emperor or mikado (Mutsu Hito, born, 1852, succeeded to the throne 1867) are vested the executive power with the advice of his ministers, and the legislative power with the consent of the diet. The latter is composed of a House of Peers and a House of Representatives. The land is held largely by peasant proprietors and produces rice and cereals, tea, sugar, and silk. Coal is also abundant, and there are also deposits of sulphur. Early in 1902 an Anglo-Japanese alli-

ance was formed to protect the common interests of Japan and Great Britain in the Far East.

Japan adopts foreign ideas, 11, 27.

Commerce with Portugal, 10, 166.

History of, 10, 165.

National flower of, 1, 201; 5, 56.

Rise of, 11, 27.

United States and, 11, 27.

War with China, 10, 163.

Russia, 10, 173.

Japanese fairy tales, 3, 20.

long-tailed fowl, 4, 107.

maple, 4, 408.

ports opened by Perry, 11, 27.

weights, 13, 220.

Japhet, 3, 231.

Japonicum atropureum, 4, 408.

Jason, 10, 108.

Jassy, Treaty of, 10, 340.

Java.—An island of the Asiatic Archipelago, the chief seat of Dutch power in the East Indies. Capital, Batavia (pop., 116,000); the other large towns are Samarang and Soerabaya. The area of Java, with Madura, is 50,554 sq. miles, with an estimated population of 26,125,053. Its exports are coffee, tea, sugar, rice, indigo, pepper, and tobacco. The prevailing religions are Roman Catholicism and that of the Reformed Dutch Church. Besides the natives and the Dutch, Java contains a number of Chinese, Arabs, and various Orientals.

Java, 11, 15, 33.

Poison Valley of, 5, 154.

Jaw bone, 1, 273.

Jay, Blue, 4, 152.

Canada, 4, 152.

Rio Grande, 4, 153.

Stellar's, 4, 153.

Jay, John, 11, 243.

Treaty, 11, 182, 243.

Jayhawkers, 12, 42.

Jealousy, Harriet Martineau on, 2, 277.

is excess of zeal, 2, 278.

of children, 2, 277.

Jeanne d' Arc, 10, 406.

"Jeannette" Polar Expedition.—July 8, 1879, an Arctic expedition, sent out by James Gordon Bennett, proprietor of the "New York Herald," left San Francisco in the steamer "Jeannette" under command of Lieut. De Long, U. S. N. The vessel was early caught in the ice-pack and drifted for nearly two years without escaping from its grip. June 11, 1881, she was crushed by the ice and sank. The crew took to their boats, two of which reached the coast of Siberia. The crew in one of these succeeded in reaching Irkutsk in safety, after

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much hardship. Two sailors from the other boat made their way to Bulcour and sought succor for De Long and his companions. A searching party started out, but failed to reach them. Their bodies were finally discovered, brought to New York by special steamer, and given a public funeral, Feb. 22, 1884. The third boat and its occupants were never heard of again.

Jebb, Richard Claverhouse.—Born, 1841. An eminent British scholar, and regius professor of Greek at Cambridge, England. He has represented his university in the House of Commons during several sessions.

Jedburgh.—The capital of Roxburghshire, Scotland, noted for the remains of an abbey which was founded in 1118 by David I. Pop., about 3,500.

Jefferson, Fort, 12, 42.

Jefferson, Joseph.—Born at Philadelphia, 1829. A noted actor. He first became prominent in the character of Asa Trenchard in "Our American Cousin." His principal character was that of Rip Van Winkle. He published an autobiography in 1890. Died, 1905.

Jefferson, Mount.—(1) One of the principal summits of the White Mountains in N. H., near Mount Washington. Height, 5,725 ft. (2) A peak in the Cascade Mountains, Ore. Height, 10,200 ft.

Jefferson, Thomas, 11, 160.

and Hamilton, 11, 172.

brought rice to America, 5, 88.

opposes Assumption and Protection, 11, 179.

National Bank, 11, 179.

Presidency of, 11, 196.

Theory of Government, 11, 175.

Jefferson Barracks, 12, 42.

Jefferson Davis's Birthday, 13, 99.

Jeffersonville.—A city in Ind., on the Ohio River at its falls, opposite Louisville, Ky. Pop. (1900), 10,774.

Jeffreys, George, Baron Jeffreys.—(1648–1689.) An English judge who became notorious on account of his cruelty while presiding over the Bloody Assizes in support of James II. He died in the Tower of London.

Jeffreys, Judge, 10, 326.

Jehoiakim, 10, 184.

Jejunum, 1, 278.

Jekyl Island, 12, 42.

Jellachich, 10, 377.

Jelly-fish, 4, 379.

Comb-bearer, 4, 379.

Dish jelly-fish, 4, 379.

Hydra, 4, 380.

Medusa, 4, 379.

Jelly-fish — *Continued.*

Portuguese man-of-war, 4, 380.

Sea anemone, 4, 380.

Sea-fan, 4, 381.

Sea nettle, 4, 379.

Sea-pen, 4, 381.

Jemappes, Battle of, 10, 345.

Jena (*yā'nä*).—A city in Germany, on the Saale, 45 miles from Leipsic. It is famous for the battle fought here between the forces of Napoleon and the combined forces of Prussia and Saxony, in which Napoleon was victorious (1806). It has also an old and celebrated university. Pop., 13,500.

Jenghiz Khan, 10, 154.

Jenkins, Thornton Alexander, 12, 42.

Jenner, Edward.—(1749–1823.) An English physician and the discoverer of vaccination. On May 14, 1796, he first performed the operation with entire success. In recognition, Parliament made him a grant of £10,000.

Jerome, Chauncey, 14, 160.

Jerome of Prague, 10, 289.

Jerrold, Douglas William.—(1803–1857.) An English humorist, satirist, and dramatist. He is the author of "Mrs. Caudle's Curtain Lectures."

Jerrold, Douglas, 14, 7.

Jersey.—The largest of the Channel Islands. It is 10 miles long and from 5 to 6 miles wide. The population (1901) was 52,796; the capital is St. Helier.

Jersey cattle, 4, 16.

presented to Lords Berkeley and Cartaret, 11, 47.

Jersey City.—A city in N. J. situated on the Hudson River opposite New York. Formerly it was called Paulus Hook, but in 1820 was incorporated as the City of Jersey, and as Jersey City in 1838. Tobacco is one of its most important manufactures. It is the terminus of several railway and steamship lines. Pop. (1900), 206,433.

Jerseys, The.—A collective name for East and West Jersey, into which N. J. was temporarily divided in 1676.

Jerusalem.—The ancient capital of Palestine, and is regarded as a holy city by Jews, Christians, and Mohammedans. It is in the center of the country, 33 miles from the sea and 19 miles from the Jordan. Pop., about 40,000.

Jerusalem besieged by Crusaders, 10, 258.

destroyed by Titus, 10, 185.

plundered by Egyptians, 10, 180.

Nebuchadnezzar, 10, 184.

taken by Pompey, 10, 185.

Jessamine, 5, 62.

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Jesuits.—The members of the Society of Jesus, founded by Ignatius Loyola in 1534. They have been expelled for political reasons from several countries, were suppressed in 1773 by the Pope, but were revived again in 1814.

Jesuits, 10, 298.

banished from Spain, **10, 340.**

JESUS.—

Jesus is the personal name of Christ, meaning "the anointed," the official name of the central figure of Christianity, the object of worship of his followers. According to the belief of the Christian church he was born at the village of Bethlehem, Judea, of a virgin mother. The date of his birth is now believed to be about four years earlier than the Christian era. In order to avoid persecution his reputed parents fled with him, in his infancy, into Egypt. Returning to Palestine the family settled in Nazareth, where the child grew to manhood in the home of poverty, working at the carpenter's trade. When he reached the age of thirty he entered definitely upon his ministry. This was inaugurated by the rite of baptism administered by John the Baptist. Following this came a period of retirement in the wilderness, known as "the temptation." He then collected a band of disciples, twelve in number, whom he also called apostles. With these he journeyed back and forth over the territories of Galilee and Judea "preaching the kingdom" and doing deeds which are variously described as miracles, signs, and wonders. His purpose was to establish the kingdom of God in the world by preaching its principles to the people at large, incidentally confirming his preaching by works which were also signs; while at the same time he gave no less care to the training of the twelve so that they might in the future continue the work which he personally inaugurated.

The narratives of his life, recorded by four evangelists, two of whom were apostles, were not written until many years after his death; which had this advantage that it gave the writers time to see the events in true perspective. Only the most salient events of his life and the most suggestive of his words are given, and in recording these each writer regards the subject from his own point of view. Apart from the discourse, known as the Sermon on the Mount, and a few conversations recorded by the evangelist John, the teaching of Jesus was given mainly in the form of parables, such as are easy to remember and carry their own application. The writers state many times that vast numbers of miracles were wrought, and thus imply that those that are recorded, of

which there are only about forty, are given only as specimens. The main characteristic of these works is their sympathy and benevolence. For the most part they consist of healing the sick, including demoniacs, and there are three cases of raising the dead. In the early part of his ministry the ecclesiastical sect of the Pharisees were favorably disposed toward Jesus and would gladly have treated him at least as the coming man; but his scathing denunciation of their pride and hypocrisy, and his persistent disregard of their customs, changed their favor into the bitterest hostility. With the rival sect of the Sadducees, who were the priestly class, and Jesus, there was little in common at any time, these people being aristocratic, wealthy, and unspiritual. These two sects sunk for the time being their mutual hostility and united with the purpose of crushing Jesus. After a public ministry of about three years, he was, at the time of the feast of the passover in Jerusalem, betrayed by his disciple Judas Iscariot, apprehended, tried before the ecclesiastical tribunal known as the Sanhedrin, and by them sentenced to death. As they had not the power to carry out their sentence, they took him to the judgment seat of the Roman procurator, Pontius Pilate, demanding the right to carry out their Jewish law, and adding other charges of a political nature.

Pilate, protesting that he found no fault in Jesus, finally delivered him up to his enemies to do their will. In scenes of great cruelty he was taken out of the city and crucified upon a hill called Golgotha, or Calvary. The day of the crucifixion is set apart in the church, following the Jewish calendar of the passover, as Good Friday. He was buried that same afternoon, his grave was closed with the imperial seal of Rome, and a guard of Roman soldiers was detailed to watch the tomb. On the third day, according to the Jewish method of reckoning, the day that corresponds to our Easter Sunday, the grave was found empty: the Lord had risen from the dead. For forty days following the resurrection, Jesus associated with his disciples, though apparently with less intimacy than before, and while he was seen by many, — "above five hundred brethren at once," — he did not resume his works of healing nor his discourses to the people. He instructed his disciples to continue the work which he had initiated, his last command being, "Go ye into all the world and preach the Gospel to every creature." In the presence of his disciples upon the summit of the Mount of Olives, he ascended until a cloud received him out of their sight.

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Jesus Christ, Crucifixion of, 10, 359.

Jet, Symbolism of, 1, 197.

Jetsam.—Goods which, thrown into the sea, have sunk.

Jevons, William Stanley.—(1835-1882.) An English logician and political economist.

Jew, The Wandering.—The "Wandering Jew" was last seen in the 17th century. On Jan. 1, 1644, he appeared in Paris, and created a great sensation among all ranks. He claimed to have lived 1,600 years, and to have traveled through all regions of the world. He was visited by many prominent personages, and no one could accost him in a language of which he was ignorant. He replied readily and without embarrassment to any questions propounded, and he was never confounded by any amount of cross-questioning. He seemed familiar with the history of persons and events from the time of Christ, and claimed an acquaintance with the celebrated characters of sixteen centuries. Of himself he said that he was an usher of the court of judgment in Jerusalem, where all criminal cases were tried at the time of our Saviour; that his name was Michab Ader; and that for thrusting Jesus out of the hall with these words, "Go, why tarriest thou?" the Messiah answered him, "I go, but tarry thou till I come," thereby condemning him to live till the day of judgment. The learned looked upon him as an impostor or madman, yet took their departure bewildered and astonished.

Jewel-weed, Pale, 5, 18.

Spotted 5, 18.

Jewish breastplate, 1, 193.

Calendar, 13 102.

oath, 12, 346.

Jews, Captivity of the, 10, 184.

expelled from Spain, 10, 280.

History of the, 10, 183.

Jews, Number of, in the World.—According to the "Jewish Year Book," there are 11½ millions of Jews distributed throughout the world. Of this total 6 millions are to be found in Russia, nearly 2 millions in Austro-Hungary, 1½ millions in the United States, Canada, and South America, about 600,000 in Germany, 160,000 in Great Britain, 100,000 in Holland, 150,000 in Morocco, 50,000 in Russia in Asia, 105,000 in Tripolis and Tunis, 270,000 in Rumania, 450,000 in Turkey and Turkey in Asia, 50,000 in Abyssinia, 44,000 in Algeria and the Sahara, 30,000 in Bulgaria, 80,000 in France, 40,000 in Italy, 35,000 in Persia, and 25,000 in Egypt.

Jezebel, 10, 82.

"**Jim Crow**."—A negro dramatic song and dance, first brought out by Thomas D. Rice, the first "negro minstrel" in Washington, in 1835. Joseph Jefferson, when only four years old, appeared with him in this dance.

Jingoism.—The term originated in England during the Russo-Turkish War, when the Conservative party under Lord Beaconsfield strongly advocated intervention in behalf of Turkey, while the Liberals, headed by Gladstone, were as strongly opposed. Popular interest in the discussion was great and found expression in the song:—

"We don't want to fight, but, by *jingo*, if we do,

We've got the ships, we've got the men,
we've got the money too."

Hence the word Jingo came to be applied to the war party. It is now commonly applied both in England and America to parties extravagantly enthusiastic in defense of the national honor.

Jinistan, fairy land of the Koran, 3, 392.

Jin-tsung, 10, 154, 157.

Joan of Arc, 10, 406; 14, 122.

Job.—The title of one of the books of the Old Testament, and also the name of its subject. The prologue and epilogue of the work are in prose, but the main body is in verse, possessing great literary and spiritual beauty. Carlyle called it the greatest poem in the world. Two subjects are discussed: The mystery of suffering, and the soul's quest after God. The trend of thought is indicated in two sentences: "Oh that I knew where I might find him!" and "I have heard of thee by the hearing of the ear, but now mine eye seeth thee." Job himself has passed into popular thought as the model of patience.

Johannesburg (*yo-hän'nes-börg*).—A town in the Transvaal, in South Africa, the center of gold-fields and an important place during the Boer War. Pop., 102,714.

Johannesburg founded, 11, 19.

John of England, 10, 262.

John of Gaunt, 10, 271.

John I. of Portugal, 10, 286.

John XII., Pope, 10, 260.

John Doe, 13, 117.

John Hyrcanus, 10, 185.

Johnnies and Johnny, 12, 42.

John Sobieski of Poland, 10, 237.

Johns Hopkins University.—A famed institution of learning founded by Johns Hopkins at Baltimore, Md. By his will he bequeathed \$7,000,000 in 1873 to be divided between the Johns Hopkins hospital and the university which was incorporated in 1867 and opened

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- for instruction in 1876. Attached to it is a collegiate department for under-graduates, as also a medical school which practically forms part of the university.
- Johnson, Andrew**, 12, 311.
and Congress, 12, 155.
Impeachment of, 12, 157.
referred to, 14, 95, 229.
succeeds Lincoln, 12, 155.
- Johnson, David**, 9, 331.
- Johnson, Eastman**.—Born at Lowell, Me., 1824; died, 1906. A noted genre and portrait-painter, elected academician in 1860. His chief productions are "The Old Kentucky Home," "The Old Stage Coach," "Husking Bee," "Cranberry Harvest," etc.
- Johnson, Edward**, 11, 58.
- Johnson, Herschel Vespasian**, 11, 382.
- Johnson, Isaac**, 11, 58.
- Johnson, Reverdy**, 12, 314.
- Johnson, Richard Mentor**, 11, 382.
- Johnson, Samuel**.—(1709-1784.) The celebrated English lexicographer, poet, and essayist.
- Johnson, Samuel**, 11, 58.
Appearance of, 8, 18.
referred to, 14, 12, 28.
- Johnson, William Samuel**.—(1727-1819.) Son of Samuel Johnson, president of Columbia College (1787-1800).
- Johnson, Sir William**, 11, 58.
- Johnston, Albert Sidney**, 12, 43.
- Johnston, Alexander**.—(1849-1889.) A noted historian. After being admitted to the bar in 1876, he became professor of jurisprudence and political economy in Princeton College from 1883 until his death. He published a "History of American Politics," "The Genesis of a New England State," "A History of the U. S.," "Connecticut a Study of a Commonwealth Democracy," and "The United States; Its History and Constitution."
- Johnston, Frances Benjamin**, 7, 389.
- Johnston, John Taylor**, 12, 314.
- Johnston, Joseph Eggleston**, 12, 48.
- Johnston, Samuel**, 11, 107.
- Johnstown**.—(1) A city in Pa., situated on Stony Creek and Conemaugh River, noted for its iron manufactories. It was destroyed in 1889 by the bursting of a reservoir, with the loss of about 3,000 lives. Pop. (1900), 35,936.
(2) A town in N. Y., on Cayadutta Creek, noted for its manufactures. Pop. (1900), 10,130.
- Joint tenants**, 13, 121.
- Joliet**.—A city in Ill., important for its railway and manufacturing industries. It contains the state prison. Pop. (1900), 29,353.
- Jonathan, Brother**, 11, 107.
- Jonathan Maccabæus**, 10, 185.
- Jon Bee**.—A pseudonym used by John Badcock.
- Jones, Anson**.—(1798-1858.) He was president of Texas (1844-45).
- Jones, George**, 14, 296.
- Jones, Hugh Bolton**.—Born at Baltimore, Md., 1848. A noted landscape painter. His chief productions were "The Return of the Cows," "The Poplars," "Near Maplewood," "Breaking Flax."
- Jones, Inigo**.—(1573-1652.) A noted English architect.
- Jones, Jacob**, 11, 244.
- Jones, John Paul**, 11, 108.
Body of, 12, 184.
- Jones, John P.**, 13, 445.
- Jones, Samuel**, on Success, 8, 123.
- Jones, Sir William**.—(1746-1794.) A famous English Orientalist, linguist, and poet; the first English scholar to master the Sanskrit language.
- Jones, William S.**, on "The Mining Engineer," 13, 444.
- Jonesboro (Ga.), Battle of**, 12, 53.
- Jonquills**, 5, 68.
- Jonson, Benjamin**.—(1573-1637.) Generally known as Ben Jonson. A famous English dramatist.
referred to, 14, 141.
- Joplin City**.—A city in southwestern Mo., center of a mining district. Pop. (1900), 26,023.
- Jordaens, Jacob**, 9, 298.
- Jordan**.—A river in Palestine, rises in Anti-Libanus, flows through the Sea of Galilee into the Dead Sea, about 19 miles from Jerusalem, after a course of 120 miles.
- Jordan**.—A river in Utah flowing from Utah Lake into Great Salt Lake, length about 40 miles.
- Jordan, David Starr**.—Born at Gainesville, N. Y., 1851. He became assistant on the U. S. Fish Commission (1877-91); professor of zoölogy at the Indiana University (1879-85), and its president (1885-91). Subsequently he was appointed president of the Leland Stanford Junior University. He wrote "Manual of the Vertebrates of the Northern U. S.," "Science Sketches," etc.
on a college education, 8, 77.
on college men in business, 8, 202.
- Joseffy (yō-sef'i), Rafael**.—A Hungarian pianist and composer, and pupil of Tausig, was born in Presburg, in 1852.
- Joseph, Story of (Arabic Legend)**, 3, 250.
- Joseph I. of Portugal**, 10, 340.

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- Joseph II.** of Austria, 14, 208.
- Josephine**, wife of Napoleon, 10, 422.
- Josephus, Flavius.**—(37-95.) A Jewish historian. His history of the Jewish race from earliest times down to 26 A. D. is an important source of information upon the events of his time.
- Josh Billings.**—The literary pseudonym of Henry W. Shaw.
- Jötuns**, 10, 120.
- Jouffrey, François**, 9, 401.
- Joule**, 5, 420.
- Journal**, 13, 39.
- Journalism**, 8, 463.
 Art department, 8, 470.
 as a career, 8, 226.
 Associated press, 8, 470.
 Business management, 8, 464.
 Circulation and advertising, 8, 472.
 Editorial staff, 8, 466.
 Evening paper, 8, 469.
 Reporting, 8, 474.
 Rewards, 8, 468.
 Salaries, 8, 467.
 Special correspondent, 8, 484.
 Stepping-stone, 8, 488.
 Sunday paper, 8, 470.
 Washington correspondent, 8, 482.
 Woman reporter, 8, 486.
 Yellow, 8, 472.
- Journals of Congress.**—The proceedings of Congress from 1774 to 1788 were published at Philadelphia in 13 octavo volumes. and reprinted at Washington in 1821, in four octavo volumes. This is the only record of the Continental and Confederation Congresses, except the "Secret Journals." "The journals, acts, and proceedings of the Convention assembled at Philadelphia which framed the Constitution of the U. S.," were published at Boston in 1819. In 1821 four volumes of the "Secret Journals of the Acts and Proceedings of Congress from the first Meeting thereof to the Dissolution of the Confederation by the Adoption of the Constitution of the United States," were published at Boston. According to the requirements of the Constitution, the Journals of Congress have been printed each session since its adoption.
- Jouvenet, Jean**, 9, 263.
- Jouvenot, Noel**, 9, 261.
- Jove**, 10, 86.
- Jovian**, 10, 232, 259.
- Jrinyi, Johann**, inventor of friction matches, 5, 194.
- Juan Fernandez** (*hö-än' fer-nän'deth*).—An island in the South Pacific belonging to Chile. It is famous as the residence of Alexander Selkirk (1704-09).
- Judæa**, 10, 184.
- Judah, Kingdom of**, 10, 184.
- Judas Iscariot**, who was an apostle of our Lord. Treasurer of the little company he habitually purloined from the common purse. He finally betrayed his Master. Afterward repenting he was abandoned by the chief priests and found death in suicide. They buried him in the "potter's field" purchased with the price of his betrayal.
- Judas Maccabæus**, 10, 184.
- Judd, Orange**, 8, 39.
- Judges, College-bred**, 8, 83.
- Judgment**, 13, 121.
- Judiciary**, 12, 314.
- Judson, Adoniram.**—Born at Malden, Mass., 1788; died at sea, 1850. A Baptist missionary who went to Burma in 1813. He translated the Bible into the Burmese language and compiled a Burmese-English dictionary.
- Jugerum**, 13, 156.
- Juglans Cineraria**, 4, 453.
 nigra, 4, 453.
 regia, 4, 453.
- Jugurtha**, 10, 218.
- Jugurthine war**, 10, 218.
- Juilliard versus Greenman**, 12, 315.
- Julian, the Apostate**, 10, 232, 259.
 Calendar, 13, 102.
- July**, 13, 102.
- Jungle fowl**, 4, 105.
 Bankhiva, 4, 105.
 Ceylon, 4, 105.
 Fork-tailed, 4, 105.
 Sonnerat, 4, 105.
- Juniata.**—A river in Pa., formed by the junction of the Little Juniata; joins the Susquehanna 13 miles northwest of Harrisburg; is noted for its picturesque scenery.
- Juniper**, 4, 476.
- Juniperus, Bermudiana**, 4, 477.
 Communis, 4, 476.
 Sabnia, 4, 477.
 Virginiana, 4, 476.
- Junius.**—The pseudonym under which the unknown author (probably Sir Philip Francis) wrote a series of letters against the British ministry, Sir William, Draper and others (1768-1772).
- Juno**, 10, 88.
- Junot, Marshal**, 14, 86.
- Jupiter**, 10, 86.
 Olympian, 9, 358.
 Statue of, by Phidias, 10, 88.
 Temples of, 10, 88.
 the planet, 5, 131.

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Jupiter, the planet — *Continued.*

Belts of, 5, 131.

Moons of, 5, 131.

Jura.—A chain of mountains in France and Switzerland, extending about 180 miles and reaching its highest elevation in peaks over 5,000 feet high.

Jurassic rocks, 5, 465.

Juror's oath, 12, 346.

Jury, 12, 315.

Grand, 12, 276.

trials, 13, 135.

Justice, Department of, 12, 398.

Justin, Saint, "The Martyr." — A Greek Church father, who was scourged and beheaded at Rome about 163 A. D.

Justinian, "The Great." — (483-565.) A Byzantine emperor (527-565) who issued a compilation and annotation of Roman Law, which is known as the "Justinian Code."

referred to, 9, 415; 10, 236, 403.

Code, 10, 236, 403.

Jutes, 8, 357.

Juvenal.—(60-140.) A Roman satirist and poet.

Juz-tsung, 10, 153.

K

Kaaba, Black stone of the, 1, 194.

Sacred to the Mohammedans, 3, 387.

Kabul, or **Cabul.**—A division in Afghanistan.

The capital is Kabul and is situated on a river of the same name on a plateau 6,000 feet above sea-level. The population of the city is about 70,000. The river is 270 miles long and flows into the Indus.

Kadyah, wife of Mohammed, 3, 387.

Kaffir.—A name variously applied to the Xosa, Pondo, Tembu tribes, the Zulus, and the Bantu family, or all African negroes south of the equator.

Kafiristan.—A district in Central Asia, on the border of Afghanistan.

Kagoshima.—A seaport in Japan, on the island of Kiusiu. Pop., 56,643.

Kaiser Wilhelm Islands are situated in the Antarctic Ocean and belong to Graham Land.

Kaiser Wilhelm's Land.—A German protectorate in the northeast of New Guinea was founded in 1884. It includes about 72,000 square miles of territory with a population of about 110,000.

Kalahari Desert.—A partially desert region in South Africa, north of the Orange River and lying almost wholly within the limits of Bechuanaland.

Kalakaua I., David.—Born, 1836; died at San Francisco, 1891. King of Hawaii (1874-91). Elected, 1874; compelled by a revolutionary movement to grant a new constitution imposing important restriction on the royal prerogative.

Kalamazoo.—The capital of Kalamazoo Co., Mich., on the Kalamazoo River; the seat of Kalamazoo College; has various manufactures. Pop. (1900), 24,404.

Kalasa, Mount, 10, 20.

Kalends, 13, 91.

Greek, 13, 91.

Kalevala, a Finnish legend, 3, 401.

Crawford's translation of the, 3, 404.

Kali, the Goddess, 10, 20.

Kalidasa.—The greatest poet and dramatist of India, about whose life nothing is known. The period of his life is estimated by scholars at periods varying from 56 B. C. to the 8th century. His fame rests chiefly upon the drama "Shakuntala," first translated by Sir William Jones in 1789.

Kalmia, 5, 13.

Kalpa, 10, 7.

Kalsomining, Measure of, 13, 147.

Kama, 10, 32.

Kamchatka.—A peninsula of eastern Siberia, between Bering Sea and the Sea of Okhotsk. Pop., 6,500.

Kamensky, 9, 411.

Kamerun, or **Cameroon.**—A German colony in West Africa extending along the Kamerun River from the Bight of Biafra to Lake Chad. It has a population of 3,500,000. It is traversed by the Kamerun Mountains which have an extreme height of 13,000 feet.

Kamloops.—In Canada, British Columbia, the principal town in the Thompson River valley. Its chief industry is grazing. Agriculture and fruit raising flourish. Kamloops is the supply point for a large ranching and mineral region. Pop. (1901), 1,594.

Kandahar.—A province and city of southern Afghanistan. The city, said to have been founded by Alexander the Great, has a population of 25,560.

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Kandy, or Candy.—A town in the island of Ceylon, 60 miles from Colombo. Pop., 20,558.

Kane, Elisha Kent, 8, 23; 11, 382; 14, 190.

Kangaroo, The great, 4, 84.

Characteristics of the, 4, 84.

Food of the, 4, 84.

Fur of the, 4, 84.

Habits of the, 4, 85.

Home of the, 4, 84.

Skin of the, 4, 85.

Kang-he, 10, 160.

Kankakee.—A city in Illinois on the Kankakee River, 54 miles from Chicago. Pop. (1900), 13,595.

Kansas.—Formerly considered to be in the far West, but now one of the North Central States of the American Union. Bounded on the north by Neb., east by Mo., south by Okla. and Ind. Ter., and west by Col. It was part of the Louisiana Purchase, and was made a separate territory in 1854. During the next half dozen years it was the scene of a conflict amounting to civil war, between the friends and opponents of slavery. The repeal of the Missouri Compromise had left to the decision of the people the question whether it should be free or slave territory, and there was a large immigration from both North and South. There was much lawlessness and violence and many conflicts of arms, which resulted in loss of life. John Brown, afterward leader of the Harper's Ferry insurrection, was prominent in the troubles in Kan. The Topeka Constitution, prohibiting slavery, was formed in 1855, and the Lecompton Constitution, favoring slavery, in 1857; the Wyandotte Constitution, which prohibited slavery, was finally adopted, in 1859, and Kan. was admitted as a state, Jan. 29, 1861. It suffered much from Confederate raids during the Civil War. The soil is fertile and agriculture and stock raising are the chief industries; coal is the principal mineral product. The capital is Topeka, and other principal towns are Kansas City, Wichita, Leavenworth, Atchison, Fort Scott, Lawrence, Emporia, and Salina: has 106 counties; area, 82,080 sq. miles; pop. (1900), 1,470,495; called the Sunflower State, sometimes, also, the Grasshopper State, from the plague of these insects that infested it for many years.

Kansas Aid Society, 11, 383.

Motto of, 14, 157.

Kansas City.—(1) The largest city of Kan., capital of Wyandotte Co., situated on the Missouri River opposite Kansas City, Mo. Pork-packing is the leading industry. Pop. (1900), 51,418. (2) Kansas City, Mo., the second city of the state, an important railway center

also celebrated for its meat-packing industry. Pop. (1900), 163,752.

Kansas-Nebraska Act, 11, 383.

Kansas River.—A river in Kan. which joins the Missouri near Kansas City; length about 900 miles.

Kant, Immanuel.—(1724-1804.) One of the most influential philosophers of modern times, and founder of the "Critical Philosophy." A native of Königsberg, Prussia.

Kant, Immanuel, 14, 256.

Kaolin, 5, 442.

used in pottery, 1, 215.

Kaou-te, 10, 151.

Kaou-tsung, 10, 154.

Karlsbad, or Carlsbad.—A town and famous watering-place in Bohemia. Its mineral springs, it is said, were discovered by Emperor Charles IV. in 1347.

Karnak.—A village in Egypt situated on the Nile, on the site of Thebes; famous for its antiquities.

Karr, Jean Baptiste Alphonse.—(1808-1890.) A French novelist, journalist, and satirist.

Kars.—A Russian Transcaucasia province, bordering on Asiatic Turkey. Area, 7,308 square miles. Also a fortress and town, capital of the Province. Pop., 20,981.

Kashmir, or Cashmere.—An Asiatic native state under British control. It is bounded on the north by Eastern Turkestan, Thibet on the east, India on the south and southwest, and Dardistan and the Pamirs on the west and northwest. Its capital is Srinagar. Area, with Jammu, 80,900 square miles; population (1901), 2,906,173.

Kathay, or Cathay.—A name early given by Europe to China, and by which it is at present known in Russia, Persia, and Turkestan.

Katrine, Loch.—A lake in Perthshire, Scotland, a few miles from Glasgow. It is noted for its scenery, and contains Ellen's Isle, mentioned in Scott's "Lady of the Lake."

Katydid, 4, 361.

Characteristics of the, 4, 360.

Reproduction of the, 4, 361.

Kaulbach, Wilhelm von.—(1805-1874.) A noted German painter, 9, 327.

Kavanagh, Julia.—(1824-1877.) A British novelist. Her works are numerous and treat chiefly of Irish life and scenery.

Kay, John.—(1742-1826.) A Scottish painter and etcher.

Kea-King, 10, 160.

Kean, Charles John.—(1811-1868.) English actor, son of Edmund Kean.

Kean, Edmund.—(1787-1833.) Celebrated English actor, 14, 38.

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Kearny, Philip, 12, 53.

"**Kearsarge**," **The**, 12, 54.

Keats, John.—(1795-1821.) Famous English poet. He first studied medicine, but after taking his degree never practised. Becoming acquainted with Leigh Hunt, Shelley, and Haydon, he turned his attention to authorship, wrote extensively for the periodicals, and in 1817 his first collection of poems was published.

Kea-tsing, 10, 158.

Keats' love letters, 1, 89.

Keble, John.—(1792-1866.) An English clergyman and religious poet. He was one of the chief promoters of the Oxford Movement, and is known at the present time principally as the author of "The Christian Year."

Kedron.—A brook that passes around Jerusalem and flows into the Dead Sea.

Kee, Chinese emperor, 10, 148.

Keen-lung, 10, 160.

Keen-wan, 10, 157.

Keene, Laura.—Born in England, 1820; died at Montclair, N. J., 1873. A celebrated light-comedy actress. She was the lessee of the Olympic Theater in New York (1855-63), where she brought out many new plays, among them "Our American Cousin," with Jefferson and Sothorn in the cast. She was playing this piece at Ford's Theater, Washington, D. C., when Abraham Lincoln was assassinated.

Kelat, or **Khelat**.—Capital of Baluchistan. Occupied by England during the Afghan War.

Keller, Helen, 8, 67; 14, 172.

Keller, John W., on City and Country, 8, 104.

Kellerman, General, 10, 345.

Kelley, "Pig-iron," 12, 350.

Kelley, William Darrah, 12, 316.

Kellogg, Clara Louise.—Born at Sumterville, S. C., 1842. An opera singer, who made her first appearance in New York in 1861. She did much for music in America by organizing (1874) an English opera company.

referred to, 14, 90.

Kelly, John, 12, 316.

Kelp.—An alkaline matter produced by the combustion of sea-weeds. They are dried in the sun, then burned in shallow excavations at a low heat. Twenty to twenty-four tons of sea-weed produce one ton of kelp.

Kelvin, Lord.—See THOMSON, WILLIAM.

Kemble, Adelaide.—(1814-1879.) A noted operatic singer, daughter of Charles Kemble.

Kemble, Charles.—(1775-1854.) A famous English actor; he visited America, with his

daughter Fanny, in 1832, and appeared in New York in "Hamlet."

Kemble, Fanny (FRANCES ANNE).—(1809-1893.) Actress, reader, and author; daughter of Charles Kemble.

Kemble, George Stephen.—(1758-1822.) An English actor, brother of John Philip Kemble.

Kemble, John Mitchell.—(1807-1857.) An English historian and philologist. Son of Charles Kemble.

Kemble, John Philip.—(1757-1823.) A celebrated English tragedian, son of Roger Kemble.

Kempenfeldt, Richard.—(1718-1782.) An English rear-admiral who was lost with the "Royal George" off Spithead, Aug. 29, 1782. In refitting his ship the guns were shifted to one side to give her a slight heel, but the strain was too great and she broke up and went down with her admiral on board.

Kemper, Reuben, 11, 244.

Kendal, Mrs. (MARGARET BRUNTON ROBERTSON). English actress. Born, 1849. Wife of William Hunter Kendal.

Kendal, William Hunter (stage name assumed by WILLIAM HUNTER GRIMSTON). Born, 1834. First appeared on the stage in 1861.

Kendall, Amos.—Born at Dunstable, Mass., 1789; died at Wash., D. C., 1869. A politician. He was associated with S. F. B. Morse in his telegraph patents; was postmaster-gen. (1835-40).

Kendrick, Mrs. George W., on "If I Were A Girl Again," 1, 262.

Kenesaw Mountain, 12, 54.

Kenilworth.—A town in Warwickshire, England. Kenilworth Castle, founded about 1120, was long a royal residence. Among the notable features of its ruins are the Norman keep.

Kennan, George.—Born at Norwalk, O., 1845. A traveler, lecturer, and writer. The Russo-American Telegraph Co. sent him to Siberia in 1864 to supervise the construction of lines. In 1885-86 he was sent by "The Century" Magazine to Russia to investigate the condition of Siberian exiles. He wrote "Siberia and the Exile System," and "Tent Life in Siberia."

Kennebec.—River in Maine, rises in Moosehead Lake and flows into the Atlantic, near Bath. Length, 160 miles.

Kennebec Purchase, 11, 59.

Kennedy, James J., on "The Tailor," 13, 423.

Kennedy, John Pendleton.—Born at Baltimore, 1795; died at Newport, R. I., 1870. A politician and novelist. He was a member of Congress from Md. (1839-45) and secre-

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- tary of the navy (1852-1853). His chief novel is "Horse-Shoe Robinson."
- Kenosha.**—The capital of Kenosha Co., Wis., situated on Lake Michigan; a trading center. Pop. (1900), 11,606.
- Kensett, John Frederick.**—Born at Cheshire, Conn., 1818; died at New York, 1872. A landscape painter. In 1859 he was appointed one of the commission to supervise the decoration of the capitol at Washington.
- Kensington.**—A parish and western suburb of London. It contains Holland House, Kensington Palace, and Kensington Gardens.
- Kent.**—The southeasternmost county of England. It is bounded by Essex and the North Sea on the north, the North Sea on the east, English Channel and Sussex on the south, and Surrey on the west. It has an extensive hop-raising industry.
- Kent, James.** 11, 244.
- Kent, William.**—(1684-1748.) An English painter, sculptor, architect, and landscape gardener.
- Kentucky.**—A southern central state of the U. S. of America. Bounded on the north by Ohio, Ind., and Ill., east by W. Va. and Va., south by Tenn., west by Mo. The name signifies "dark and bloody ground," so called from the many conflicts between the early settlers and the Indians. Daniel Boone was one of the first explorers of that region, beginning in 1769. The first permanent settlement was at Harrodsburg in 1774; Ky. was made a county of Va. in 1776, but was detached and admitted into the Union as a state in 1792. It was one of the slave states, but did not join in the secession movement of 1860-61. Its people were divided in sentiment and the state furnished a large number of soldiers for both the Union and Confederate armies. The state adhered to the Union, but it was represented in the Confederate Congress, as well as in the Congress of the U. S. It suffered greatly from raids and from its occupation by both armies; many minor actions took place within its limits, and one important battle, at Perryville, in Oct., 1862. The surface is mountainous in the east and undulating in the west; in the central part is the famous "Blue Grass region"; it leads all other states in the production of hemp and tobacco; the raising of horses, cattle, and mules is a leading industry; coal and iron are mined in large quantities. The capital is Frankfort and the chief city is Louisville, on the Ohio River; other chief towns are Covington, Lexington, Newport, Paducah, Owensboro, Henderson, and Bowling Green. It has 119 counties; area, 40,400 sq. miles; pop. (1900), 2,147,174; popularly called the Corncracker State.
- Kentucky Resolutions.** 11, 244.
- warbler, 4, 186.
- Kenyon College.**—A Protestant Episcopal seat of learning at Gambier, O. (See list of "COLLEGES.")
- Keokuk.**—One of the capitals of Lee Co., Iowa, situated on the Mississippi River at the foot of the rapids; a railway center and canal terminus; meat-packing and iron manufactures are the important industries.
- Kepler, Johann.**—(1571-1630.) Celebrated German astronomer, one of the founders of modern astronomy. He was a discoverer of the three laws of planetary motion.
- referred to, 14, 6, 95, 177.
- Kerosene.** 5, 228.
- Kerry.**—A maritime county in Munster, Ireland; chief town is Tralee. Pop. of county (1901), 165,331.
- Kerschwassar.** 4, 471.
- Kertch.**—Russia. A seaport in the eastern part of the Crimea, noted for its antiquities. Pop. (1897), 29,000.
- Ketch, John, or Jack.**—A famous English executioner. Died, 1686.
- Kettle Creek (Ga.), Battle of.** 11, 111.
- Keweenaw Point.**—A peninsula in northern Mich., projecting into Lake Superior, noted for its copper mines. An arm of the lake at the same point is known as Keweenaw Bay.
- Kew Gardens.**—Botanical gardens originated by Lord Capel about the middle of the 18th century. They are situated on the Thames, nine miles west of London.
- Key, Francis Scott.**—Born in Frederick Co., Md., 1780; died at Baltimore, 1843. Author of "The Star-Spangled Banner" (which see).
- Keyes, Erasmus Darwin.** 12, 54.
- Keystone State.**—The name given to Pennsylvania, the central state of the original thirteen.
- Key West.**—(1) An island of the Florida Keys, belonging to Monroe Co., Fla., 60 miles southwest of Cape Sable. (2) An important U. S. naval station, a seaport, and capital of Monroe Co., on the island of Key West, famous for its manufacture of cigars.
- Khalifat** in control of Sudan, 11, 19.
- Khartum.**—A city of Nubia, Africa; founded by Mehemet Ali, in 1823. Pop., about 25,000.
- Massacre of Gordon at, 11, 18.
- Khita.** 10, 180.
- Khiva.**—Capital of Khiva, a khanate of Central Asia. Pop., about 5,000.
- referred to, 11, 26.
- Subdued, 11, 26.

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- Khufu.**—An Egyptian monarch of the 4th dynasty, who lived about 2800-2700 B. C.; builder of the great pyramid at Gizeh.
- Khyber Pass.**—In Afghanistan, a very difficult mountain pass, between Fort Jumrud and Dakka; an important strategic point.
- Kiao-chau,** Germany takes, 11, 28.
- Kickapoo Indians.**—A tribe of the Algonquin stock of Indians, who early inhabited the valleys of the Ohio and Illinois rivers. In 1779 they allied themselves with the Americans against the British, but later turned and fought against the new government until they were subjugated by Wayne in 1795, when they ceded part of their lands to the whites. In 1802-03-04 they ceded more territory. In 1811 they joined Tecumseh and fought against the Americans at Tippecanoe and in 1812 united with the British but were badly defeated. By treaties made in 1815-16-19 they ceded still more of their territory, and about this period portions of them became roving bands. Some of them were removed to Kansas and afterward a portion of the tribe migrated to Mexico, whence about 300 were in 1873 returned by the government and placed on reservation in the Ind. Ter.
- Kidd, William,** 11, 59.
- Kidney plexus,** 1, 284.
- Kieff, or Kiev.**—The capital of the government of Kieff, in southwestern Russia. It is sometimes called the "Mother City" of Russia, and contains an interesting cathedral.
- Kiel.**—In Prussia, a seaport in the province of Schleswig-Holstein; the chief German naval station in the Baltic; noted for its fine harbor. Pop. (1900), 107,938.
- Kies, Mrs. Mary E.,** first woman patentee, 7, 376.
- Kilauea.**—An active volcano in Hawaii. Height, 4,000 feet.
- Kilbourn *versus* Thompson,** 12, 316.
- Kildare.**—(1) A county in Leinster, Ireland, famous for its antiquities. (2) An ancient town of County Kildare.
- Kilimanjaro (Great Mountain).**—The highest mountain in Africa, situated on the west border of Zanzibar. It reaches about 20,000 feet above sea-level.
- Kilkenny.**—The capital of County Kilkenny, Leinster, Ireland, situated about 60 miles southwest of Dublin. It contains the remains of a noble castle erected in the 12th century by Richard Strongbow.
- Killarney.**—A town in County Kerry, Ireland, made famous by its lakes of surpassing beauty.
- Killdeer,** 4, 129.
- Killington Peak.**—A peak of the Green Mountains in Rutland Co., Vt.; height, 4,240 ft.
- Kilmainham Treaty,** 10, 382.
- Kilo,** 13, 153.
- Kilogram,** 13, 153.
- Kiloliter,** 13, 153.
- Kilometer,** 13, 153.
- Kilo-Watt,** 5, 420.
- Kilpatrick, Hugh Judson,** 12, 54.
- Kimball, Richard Burleigh.**—Born at Plainfield, N. H., 1816; died at New York, 1892. An author. He built part of the first railroad in Tex., and founded the town of Kimball in the same state. His writings include "Letters from Cuba," "Stories of Exceptional Life," and "Undercurrents of Wall Street."
- Kimberley.**—The capital of Griqualand West, South Africa, the diamond center of the world. It sustained in 1899 a severe siege by the Boers, but was successfully relieved by Gen. Methuen.
relief of, 11, 20.
- Kin, Emperor,** 10, 156.
- Kinchow, Battle of,** 10, 163.
- Kindergarten.**—A training-place for children, instituted by Friedrich Froebel (1782-1852.) The system has made rapid progress in America and England, and in both countries there is a Froebel Society which consists of a large number of thinkers and workers in educational affairs.
- Kindergarten,** a factor in eliminating evil, 2, 376.
at home, 7, 11.
First gift, 7, 11.
Second gift, 7, 12.
Third gift, 7, 14.
Fourth gift, 7, 16.
Fifth gift, 7, 17.
Sixth gift, 7, 19.
Seventh gift, 7, 19.
Eighth gift, 7, 21.
Ninth gift, 7, 21.
Tenth gift, 7, 22.
Eleventh gift, 7, 23.
Twelfth gift, 7, 24.
Thirteenth gift, 7, 25.
- Kindergarten occupations,** 7, 26.
First occupation, Materials for, 7, 28.
perforating or pricking, 7, 27.
Second occupation, sewing, 7, 29.
Third occupation, drawing, 7, 31.
Fourth occupation, coloring and painting, 7, 34.
Fifth occupation, paper interlacing, 7, 36.
Sixth occupation, weaving, 7, 37.
Seventh occupation, paper folding, 7, 42.
Eighth occupation, paper-cutting, mounting and silhouetting, 7, 49.
Ninth occupation, pea-work, 7, 51.

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Kindergarten—*Continued.*

Tenth occupation, cardboard modeling,
7, 52.

Eleventh occupation, modeling in clay,
7, 54.

Kindergarten, Round singing in the, 9, 77.

Selfish child benefited by, 2, 296.

Kindergartens in connection with public
schools, 2, 385.

Teacher, 2, 380, 383.

teaching an occupation for women, 7, 367.

training for mothers, 2, 236.

Vocal training in the, 9, 70.

King, Charles.—Born at New York, 1789; died
in Italy, 1867. A journalist and educator, son
of Rufus King; president of Columbia College
(1849-64).

King, Francis S.—Born in Me., 1850. A noted
wood-engraver; one of the organizers of the
Society of American Wood-engravers.

King, Frost, Russian fairy tale, 3, 44.

King Charles spaniel, 4, 21.

Kingbird, 4, 197.

Kingcrab.—A genus of Crustacea, the sole liv-
ing representative of the order *Merostomata*.
The head and thorax are united, and covered
by a shield, convex above, concave beneath.
The American species is *Limulus Polyphemus*.

Kingcrab, 4, 320.

Kingfisher, 4, 145.

Belted, 4, 145.

Eggs of the, 4, 117.

Habits of the, 4, 145.

Nest of the, 4, 117.

King George's War, 11, 59.

King Kojala, Russian fairy tale, 3, 40.

King O'Toole and his Goose, Irish fairy tale, 3,
131.

King Philip's War, 11, 46.

King rail, 4, 130.

King, William Rufus, 11, 383.

King William's War, 11, 59.

King's Daughters.—A religious order founded
by ten women in New York City, in 1886. It
is interdenominational, and has adherents in
all the churches and in many nations. The
members are bound to serve the needy wher-
ever found, and to aid in all good work. It
numbers many thousands, and the badge of
the order is a cross bearing date 1886, and the
letters I. H. N.

Kings, Hyksos, 10, 179.

Kingsley, Charles.—(1819-1875.) An English
clergyman and author, an advocate of Christian
socialism.

Kingsley, Elbridge.—Born at Carthage, Ohio,
1842, a noted wood-engraver. His engravings

are chiefly of the works of Inness and of the
Barbizon painters.

King's Mountain (S. C.), Battle of, 11, 111.

Kingston.—The capital of Ulster Co., N. Y.; on
the Hudson, 80 miles north of New York; an
important river port, noted for the manufacture
of cement. Pop. (1900), 24,535.

Kioto.—A city of the main island of Japan;
until 1869 the residence of the Mikado. Pop.
(1898), 353,139.

Kipling, Rudyard.—Anglo-Indian writer and
"uncrowned laureate" of the British empire,
was born at Bombay, India, Dec. 30, 1865, son
of J. Lockwood Kipling, formerly head of the
Lahore School of Industrial Art. He was edu-
cated at the United Services College in North
Devon, England, and returning to India be-
came a writer on the "Civil and Military Ga-
zette" at Lahore, and composed poems, bar-
rack-room ballads, and stories, the fame of
which early brought him into prominence. He
has traveled in China, Japan, Australia, Africa,
and in the United States, where he married an
American lady. His poems and tales descrip-
tive of Anglo-Indian military and civil life
have won him fame as a clever and entertain-
ing as well as original writer. His chief pub-
lications embrace "Departmental Ditties,"
"Plain Tales from the Hills," "Phantom
Rickshaw," "Soldiers Three," "The Story of
the Gadsbys," "Under the Deodars," "The
Light that Failed," "Life's Handicap," "Bar-
rack-room Ballads," "Many Inventions,"
"The Jungle Book" (two series), "The Seven
Seas," "Captains Courageous," "The Day's
Work," "Stalky and Co.," and "Kim."

quoted on cod-fishing, 4, 286.

"Just-so stories," 2, 182.

Kirk, John Foster.—Born at Fredericton, N.
B., 1824. A historian and bibliographer; author
of "History of Charles the Bold," and of a
supplement to Allibone's "Dictionary of Eng-
lish Literature."

Kirkbride, Thomas S.—Born near Morrisville,
Pa., 1809; died at Phila., 1883. A noted physi-
cian. He was superintendent of the Pa. Hos-
pital for the Insane (1840-83).

Kirke, Edmund.—The pseudonym of James
Roberts Gilmore, a noted author.

Kirke's Lambs, 10, 326.

Kirkland, Samuel, 11, 59.

Kirkwood, Samuel Jordan, 12, 316.

Kirmiss, or Kermess.—This word has of recent
years come into use in the United States to de-
scribe a sort of entertainment usually given for
charitable purposes in churches, and in relig-
ious and social organizations. The origin of the
word appears to be Icelandic. The Kirmiss in

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- the Low Countries of Holland and in French Flanders is usually an annual fair or town or village festival, sometimes held on the feast of patron saints and accompanied with religious observances, though more often with feasting, dancing, and other forms of amusement. The meaning of the word is a fair or church festival.
- Kirserite**, 5, 210.
- Kislev**, 13, 102.
- Kiss, August**, 9, 404.
- Kit Carson**, 12, 221.
- Kitchen**, 1, 24.
 Cupboard, 1, 24.
 Floor, 1, 24.
 Furniture, 1, 24.
 Ice-box, 1, 25.
 Lighting the, 1, 24.
 Pantry, 1, 24.
 Range, 1, 23.
 Sink, 1, 23.
 Walls, 1, 23.
- Kitchen Cabinet**, 11, 383.
- Kitchener, General Horatio Herbert**.—Baron Kitchener of Khartum, was born June 24, 1850, and educated at the Royal Military Academy at Woolwich. He entered the Royal Engineers in 1871, and early took part in surveys of Palestine and Cyprus, and in 1882-84 commanded the Egyptian cavalry, afterward reforming and remodeling the Khedive's army. In 1883-85 he served in the Sudan campaign, and in the three following years was governor of Suakim. As Sirdar of the Egyptian army he undertook operations against the Khalifa and his dervishes in revolt, and pushing on up the Nile he fought the battle of Omdurman, Sept. 2, 1898, inflicting defeat on the Khalifa's army, for which he was raised to the peerage, and promoted to be major-general in the British army. Early in 1900, he resigned the Egyptian Sirdarship to become chief of Lord Robert's staff in South Africa, later on succeeding the latter in full command of the British forces operating against the Boers. In 1905 he was appointed to the command of the army in India.
 in Egypt, 11, 18.
 in Sudan, 11, 19.
 in South Africa, 11, 19.
- Kite**.—A genus of *Falconidae*, of which there is only one species, a native of Britain. The kite has a weaker bill and talons than the hawk, but the wings are much longer, and the tail is long and forked.
- Kite**, a plaything, 2, 128.
- Kit fox**, 4, 33.
- Kittatinny, or Blue Mountains**.—A range of mountains in southern N. Y., N. J., and north-eastern Pa., belonging to the Appalachian system.
- Kittery**.—A seaport in Me., at the mouth of the Piscataqua River; contains a U. S. navy yard. Pop. (1900), 2,872.
- Kittiwake**, 4, 234.
- Kitto, John**.—(1804-54.) An English student who, though a layman, wrote or compiled several valuable books relating to the Bible.
 referred to, 14, 190.
- Kiusiu**.—One of the principal islands of Japan, situated southwest of the main island. Its chief city is Nagasaki.
- Klamath Indians**.—A tribe of Indians numbering about 600, distributed among 11 settlements in the Klamath reservation in Oregon. They formerly occupied a part of Cal., but the influx of whites led to trouble in 1851. Peace was soon restored. In 1864 they ceded large tracts of land to the government and settled on a reservation.
- Klein-Else**, Austrian fairy tale, 3, 105.
- Kleist, Heinrich Bernt Wilhelm von**.—(1777-1811.) A German dramatist of great talent and greater promise. He died by suicide at the age of 34 years.
- Klondike**.—A river in the Northwest Territory, Canada, emptying into the Yukon at Dawson, Alaska. The name is also applied to the region through which it flows, famous for its gold mines.
- Klopstock, Friedrich Gottlieb**.—(1724-1803.) A German poet and theologian.
- Knaus**, painter, 9, 327.
- Kneller, Sir Godfrey**.—(1646-1723.) One of the first portrait-painters of his day. He was German by birth, but worked mostly in England, being patronized by Charles II. and other sovereigns, 9, 275.
- Knight, Charles**.—(1791-1873.) An English publisher, editor, and author.
- Knight, James**.—An agent of the Hudson Bay Company. In 1818 he sailed in search of the fabled Straits of Anian and was not heard of again. Nearly 50 years later the wreck of his ships was discovered at Marble Island by a whaling party.
- Knight, John**, 14, 49.
- Knight, Richard Payne**.—(1750-1824.) An English archæologist. His valuable collection of coins, etc., were left to the British Museum.
- Knights of Labor**, 12, 317.
- Knoll, Conrad**, 9, 404.
- Knots and Splices**, 6, 352.
 Blackwall hitch, 6, 353.
 Bowline, 6, 352.
 Clove hitch, 6, 353.

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Knots—*Continued.*

- Figure-eight, 6, 352.
- Half hitch, 6, 353.
- Larkshead, 6, 352.
- Length of a, 13, 147.
- Magnus hitch, 6, 353.
- Midshipman's hitch, 6, 353.
- Overhand knot, 6, 352.
- Reef-knot, 6, 352.
- Sheet bend, 6, 353.
- Square knot, 6, 352.
- Timber hitch, 6, 353.

Knowledge into power, Transmuting, 8, 193.
Practical, 8, 194.

Knowles, James Sheridan.—(1784-1862.) A British playwright, prominent in his day.

Know-Nothings, 11, 384.

Know-Somethings, 11, 384.

Knox, John.—(1505-1572.) A famous Scottish preacher, statesman, and reformer. He organized the Presbyterian church of Scotland, and it was largely through his influence that that country became Protestant, 14, 151.

Knox, Philander Chase, 12, 181, 316.

Knoxville.—Capital of Knox County, commercial and industrial center of East Tennessee. Burnside's army was here besieged unsuccessfully by the Confederates under Longstreet in 1863.

Koch, Robert.—Born in 1843. A German physician who became famous by his discovery of the bacilli of tuberculosis and of cholera.

Kock, Charles Paul de.—(1794-1871.) A French writer and dramatist, treating especially of the lower middle-class life of Paris.

Kohl, Johann Georg.—(1808-78.) A German traveler and author. He wrote several works on American geography and exploration.

Kokomo.—A city in the "gas belt" of Indiana, about 50 miles north of Indianapolis.

Kongo Free State.—A state in western central Africa, drained by the Kongo River. The state was constituted by the Berlin conference in 1885, with Leopold III. as the sovereign. By his will, dated Aug. 2, 1889, he bequeathed all his sovereign rights to Belgium. By a convention of 1890 he gave Belgium the right to annex the state after ten years. The chief exports are ivory, nuts, rubber, coffee, etc. Area estimated at 900,000 sq. miles; population about 14,000,000.

Königgratz, Battle of, 11, 7.

Konrad von Würzburg.—A German poet of the burgher class, who died in 1287.

Koran, 3, 386.

- Advice to the faithful, 3, 400.
- Bridge of Hell, 3, 397.
- George Sale quoted on the, 3, 386.

Koran — *Continued.*

- Paradise, 3, 398.
- Resurrection, 3, 394.
- Rewards to the Faithful, 3, 399.
- Sacred Light, 3, 393.

Korea, or **Corea**, known as "The Hermit Nation," a peninsula extending south of Manchuria between the Sea of Japan and the Yellow Sea. It has been independent since 1895, when it began to have intercourse with the outer world through its treaty ports. Since 1876 it has concluded treaties with Japan, China, Germany, France, Italy, Russia, Austria, Great Britain, and the United States. Its chief exports are rice, beans, and ginseng. Gold, copper, iron, and coal abound. Transportation throughout the country is still very primitive, and cultivation is backward. Confucianism and Buddhism are the chief religions. The government is an absolute monarchy, under Heui Yi, who came to the throne in 1864, and in 1897 assumed the title of emperor. The principal treaty ports are Chemulpo, Fusan, and Yuensan. Area of the country, 82,000 sq. miles; population, 10½ millions. Seoul is the capital. Pop., 200,000, 11, 28.

Independence of, 10, 163.

War with, 11, 28.

Körner (*koér'ner*), **Karl Theodor.**—(1791-1813.) A patriotic German poet.

Kosciuszko, Tadeusz, 11, 111.

Kossuth, Louis.—(1802-1894.) Patriot leader of the Hungarian revolution. In 1851 he visited England and America, where he met with enthusiastic receptions, 10, 377.

Koxinga, 10, 159.

Kraft, Adam, 9, 392.

Krag-Jorgensen rifle, 12, 190.

Krakatua.—An active volcano on an island of the same name in the Strait of Sunda, between Java and Sumatra.

Krapotkin (Prince), **Peter.**—Born in Moscow, 1842. A Russian social and political reformer; author of many works on international topics. Although a member of the oldest Russian nobility he forfeited his family claims that he might live according to his theories, 14, 275.

Krasnovodsk, 11, 26.

Kremlin, The.—A vast building in Moscow, situated on the north bank of the river Moskva, forming the center of the city. Its walls are surmounted by eighteen towers and pierced by five gates.

Kreutzer (*kroit'ser*), **Rodolphe.**—(1766-1831.) French violinist and composer. His chief work is forty "Etudes."

Kriemhilda.—See NIBELUNGENLIED, 3, 413.

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Krilloff, Ivan Andreevitch, 3, 206.

Krishna, 10, 14.

Krishna.—The eighth *Avatar*, or incarnation of the Hindu god *Vishnu*, 10, 3-14.

Kronstadt.—Seaport in the government of St. Petersburg Russia, situated near the head of the Gulf of Finland. Founded by Peter the Great in 1710. Pop., about 49,000.

Krüger, Stephanus Johannes Paulus, Hilvesum, Holland, (1825-1904), a Cape Colonist by birth, was a boy of eleven when his parents took part in the Great Trek, and shared during youth and early manhood in all the fierce struggles of the early Transvaal settlers with the native tribes; joined the Executive Council of the Republic under President Burgers, was head of the Provisional Government during the war with England (1881), elected President in 1883, for a term of five years, and re-elected three times subsequently. The many restrictions and oppressions imposed upon the British and other Uitlanders in the Transvaal led to a Reform agitation, brought to an abrupt ending by the James Raid, after which event the Pretoria Government became still more reactionary and oppressive. The sequel is fresh in everyone's memory: the Uitlanders' petitions, the Bloemfontein Conference, the protracted negotiations, the ultimatum of October 9, 1889, the many months' war, and the flight of the deposed President to Europe. Krüger was a man of great though restricted power. Sincerely pious, he belonged to the Dopper Church, the straightest sect of Dutch Calvinists, the Old Testament being his single guide to faith and practice; his state resembled that of a judge in ancient Israel rather than of a modern ruler; wily and tortuous in diplomacy, with a keen eye to material advantage, he retained many of the primitive characteristics of his race; in his youth a mighty man of valor,

his habits retained their native simplicity and uncouthness.

Krupp, Alfred.—(1812-1887.) Famous German steel gun manufacturer. He was the greatest manufacturer of heavy ordnance of modern times. He discovered the method of casting steel in very large masses.

Kuang Hsu, 10, 162.

Kublai, 10, 157.

Ku-Klux-Klan, 12, 54, 316.

Kunchinjinga.—One of the loftiest peaks of the Himalaya Mountains, situated between Nepal and Sikhim. Height, 28,176 feet.

Kung-te, 10, 152, 153.

Kungwasat, Battle of, 10, 163.

Kurdistan.—An extensive region of western Asia belonging to the Turkish and Persian monarchies. The country is mountainous. A great trade is carried on with Turkey and Persia, especially in horses. The popular religion is Mohammedanism. Pop., estimated, 3,000,000.

Kurile Islands.—A chain of islands in the north Pacific Ocean belonging to Japan. It extends from southern Kamchatka to the Island of Yezo, 32 in number, 19 of which were owned by Russia, who ceded them to Japan in 1875 in exchange for half of Saghalien. Area, 3,850 square miles; pop., 300.

Kurma, or Tortoise Avator of Vishnu, 10, 9.

Kusa, Hindu rhapsodist, 3, 321.

Kustubha, 10, 10.

Kvass, Russian liquor, 5, 88.

Kwangehanwan leased by France, 11, 29.

Kwang Ti, 10, 38.

Kwang-woo-te, 10, 151.

Kwei-yeu, 10, 157.

Kyrle (kerl), John.—Born in England in 1637, and died in 1724. A benevolent and public-spirited man, known as "the Man of Ross." Pope immortalized him in his "Moral Essays."

L

Laar, or Laer, Pieter Van.—(1613?-1674.) A noted Dutch *genre*-painter.

Lablache, Luigi.—(1794-1858.) One of the greatest singers of modern times.

Labor Day, 13, 99, 100, 102.

Department of, 12, 399.

Dignity of, 1, 131.

Knights of, 12, 317.

laws in England, 10, 380.

Party, Progressive, 12, 351.

problem, by James B. Reynolds, 13, 279.

by Rev. A. C. Doyle, 13, 282.

The Joy of a Life of, 14, 238.

Labouchere, Henry.—Born, 1831. A noted English journalist and politician. Editor of the London weekly "Truth."

Labrador.—The name given to the continental coast of North America near Newfoundland. Area, 120,000 square miles; pop., about 5,000. It is partly under the jurisdiction of Canada and partly under that of Newfoundland.

Labrador Tea, 5, 14.

La Bruyère, Jean de.—(1645-1696.) A celebrated French moralist. His greatest literary work is his "Les Caractères," the ninth edition of

- which was in press at the time of the author's death.
- Laburnum.**—A small leguminous tree, *Cytisus Laburnum*, a native of the Alps, and neighboring mountains. Cultivated for the beauty of its pendulous racemes of yellow pea-shaped flowers. Also called golden-chain and bean trefoil, 5, 2.
- Labyrinth.**—From the Latin *Labyrinthus*; derived by some from Labaris, the name of an Egyptian monarch of the 12th dynasty. The name of several celebrated buildings of antiquity consisting of many chambers or passages difficult to pass through without a guide.
- Laccadives.**—A group of islands in the Indian Ocean, discovered by Vasco da Gama, 1499; about 150 miles west of the Malabar coast. Pop. 14,000; area, 744 sq. miles.
- Lacedæmon** (*las-ē-dē'mon*).—The ancient name for Laconia, and sometimes applied to Sparta.
- Lachesis**, 10, 103.
- Lackawanna.**—A river of Pennsylvania; length, about 55 miles. Its lower valley is rich in anthracite coal.
- Laconia.**—(1) Anciently, a division of the Peloponnesus, its principal city, Sparta. (2) In modern Greece, a nomarchy corresponding nearly to ancient Laconia.
- Lacroix, Paul.**—(1806–1884.) A French novelist and historical writer. He wrote under several pseudonyms.
- La Crosse.**—The capital of La Crosse Co., Wis., situated on the Mississippi at the mouth of the La Crosse and Black rivers. Its lumber trade is important. Pop. (1900), 28,895.
- Lacrosse**, 6, 215.
- Lacteals**, 1, 279.
- Lactic acid**, 5, 231.
fermentation, 5, 235.
- Lactiferous vessels**, 4, 392.
- Lactose**, 5, 236.
- Lactuca canadensis**, 5, 64.
- Ladder**, Exercises on the inclined, 6, 43.
- Ladies' tresses**, 5, 28.
- Lading**, Bill of, 13, 38.
- Ladislav II.**, 10, 307.
- Ladoga, Lake.**—In northwestern Russia, the largest lake in Europe. Length, 130 miles.
- Ladrone Islands**, or **Mariana Islands.**—A chain of islands in the North Pacific; Guahan (Guam) belongs to the United States, the remainder of the group to Germany.
- Lady and the Wasp**, English fable, 3, 198.
- Lady-beetle**, 4, 349.
- Ladybird.**—A beetle of the family *Coccinellidæ*, so called from its graceful form and delicate coloring. Also called ladybug, ladyclock, lady-cow, ladyfly.
- Lady-bird**, 4, 349.
- Lady-bug**, 4, 349.
- Lady Day**, 13, 101.
- Lady Jane Grey**, 10, 438.
- Lady's-slipper**, The, 5, 27.
- Ladysmith.**—In South Africa, a small village in Natal. It was at Ladysmith that Sir George White with 20,000 British troops withstood a twelve months' siege by the Boers and was relieved by Gen. Sir Redvers Buller, March 1, 1900.
Relief of, 11, 20.
- Laestrygonæ**, fabled giants, 3, 379.
- La Farge, John.**—Born at New York; 1835. A distinguished landscape and figure painter, decorator, stained glass designer, and sculptor.
- Lafayette.**—The capital of Tippecanoe Co., Ind., a manufacturing and trading center. Pop. (1900), 18,116.
- Lafayette, Marquis**, 11, 112.
referred to, 10, 343.
- La Fontaine, Jean de.**—(1621–1695.) A celebrated French writer of fables, 3, 186.
- Lagos.**—(1) A seaport of Portugal; its bay is the scene of the defeat of the French by the British in 1759. (2) A British settlement on the west coast of Africa; an important trade center. Area, 1,500 sq. miles; pop., 2,000,000.
- Lahore.**—A city of India, capital of the Punjab, also of the division and district of Lahore. Pop. of the city, 180,000.
- Lake Borgne (La.), Battle of**, 11, 244.
- Lake Champlain, Battle of**, 11, 245.
- Lake Erie, Battle of**, 11, 245.
- Lake Loha**, Pure water of, 5, 164.
- Lake State.**—A name given to Mich., which borders on Lakes Michigan, Superior, Huron, Erie, and St. Clair.
- Lakewood.**—A town in Ocean Co., N. J., noted as a winter resort. Pop. (1900), 3,094.
- Lakshmi.**—In Hindoo mythology, goddess of fortune, 10, 10.
- "Lalla Rookh."**—A poem by Thomas Moore, published in 1817.
- Lamar, Lucius Quintus Cincinnatus.**—(1825–1893.) An American jurist and politician. Appointed associate justice of the Supreme Court in 1888.
- Lamar, Lucius Quintus Cincinnatus**, 12, 317.
- Lamartine, Alphonse Marie Louis.**—(1790–1869.) Renowned French poet, who also won distinction as orator and statesman. He was elected to the Academy in 1830.
- Lamb, Charles.**—(1775–1834.) English poet and essayist. His works are numbered among the classics of English literature, 14, 242.

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- Lamb Mrs. (MARTHA JOANNA READE NASH).—** (1829-1893.) An historical and miscellaneous writer. She edited the "Magazine of American History" from 1883.
- Lambert, General, 10, 377.**
- Lambert, Simnell, 10, 275.**
- Lambeth Palace.—** In the parish of Lambeth, London. The town residence of the Archbishop of Canterbury. It came into the hands of an early archbishop in 1197.
- Lambkill, The, 5, 12.**
- Lamia.—** In Greek and Roman mythology a female demon or witch who charmed children for the purpose of feeding on their blood and flesh.
- Lamian War, 10, 207.**
- Lammas Day, 13, 101.**
- Lamp, Danger to creeping child, 2, 84.**
- Lamps, Care of, 1, 124.**
- Lancashire.—** A county of northwestern England, including the cities of Liverpool and Manchester. It is chiefly celebrated for its commerce and its manufactures of textile fabrics, especially of cotton.
- Lancaster.—** (1) The capital of Fairfield Co., Ohio; pop. (1900), 8,991. (2) The capital of Lancaster Co., Pa.; a commercial and manufacturing center; was state capital (1799-1812); pop. (1900), 41,459.
- Lancaster, Dukes of. —**
1. HENRY.—(1299-1361.) An English soldier and statesman, renowned as a model of knighthood and successful in many diplomatic missions. Served, especially in Scotland and France, under Edward III., by whom he was in 1351 created Duke of Lancaster.
2. JOHN OF GAUNT.—(1340-1399.) Fourth son of Edward III., and son-in-law of Henry, above mentioned. He succeeded by right of his wife to the duchy of Lancaster. His life was spent in fruitless wars abroad and in bickerings and political jealousies at home. Upon the accession of Richard II., his political power declined. From him three English kings were descended: Henry IV., Henry V., and Henry VI.
- Lancaster, House of.—** In English history, the Lancastrian kings, descendants of John of Gaunt, fourth son of Edward III., first duke of Lancaster. They were Henry IV., V., and VI. (1399-1461), 10, 274.
- Lancaster Sound.—** A channel situated about lat. 74° N., leading from Baffin's Bay westward.
- Lancere, 9, 411.**
- Land companies, as an investment, 7, 447.**
- Landis, Charles B., on city and country, 8, 104.**
- Land League of Ireland, 10, 382.**
- Landlord and Tenant.—** A landlord is one who owns real estate; a tenant is one who hires such real estate and adapts it to his own personal use for a monetary consideration, called rent. In such a bargain the tenant is liable for all taxes unless it is otherwise stated in the lease. Leases for a year or less may be verbal, but those for a longer period must be in writing and under seal. All leases should be duplicated; one to be retained by the landlord, the other by the tenant. A tenant can sublet the property so hired, or any portion of it, unless the lease expressly forbids it, but a sub-tenant cannot underlet because a new lease invalidates a former one.
- Law of, 13, 121, 187.
- Land Office, General, 12, 398.**
- Land of Steady Habits.—** A popular name for Connecticut.
- Landor, Walter Savage.—** (1775-1864.) A well-known English writer of both poetry and prose.
- Lands, Crown, 11, 112.**
- Public, 12, 317.
- Swamp, 11, 384.
- Landseer, Sir Edwin, 9, 285.**
- Land's End.—** A promontory, the extreme southwestern point of England.
- Land spaniel dog, 4, 21.**
- Land Surveying.—** An important application of mathematics to the measurement of an area of land, whether small or large. It requires a thorough acquaintance with geometry, trigonometry, and the theory and use of the instruments employed for the determination of angles, 13, 163.
- Lane, Joseph, 12, 318.**
- Lang, Andrew.—** Born, 1844. A noted Scottish writer.
- quoted on symbols, 2, 183.
- Langland, or Langley, William.—** (About 1330-1400.) An English author of whose life but little is known. "Vision of Piers Plowman" is his chief work.
- Langtry, Mrs. (LILY LE BRETON).—** Born, 1852. An English actress who first won attention through her personal beauty.
- Language and Literature, 8, 351.**
- Americanisms, 8, 366.
- Anglo-Saxon element in English, 8, 359.
- Argumentation, 8, 426.
- Bible influence on, 8, 367.
- Causes of defective knowledge of, 3, 6.
- Celtic element in English, 8, 360.
- Composition, 8, 423.
- defined, 8, 353.
- Description, 8, 424.

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- Exposition, 8, 426.
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- Greek element in English, 8, 364.
- Grimm's Law, 8, 355.
- Hints to authors, 8, 415.
- History and structure of English, 8, 353.
- How to cultivate style, 8, 385.
- Indo-European languages, 8, 354.
- Latin element in English, 8, 361.
- Narration, 8, 425.
- Norman-French element in English, 8, 362.
- Norse element in English, 8, 363.
- Semitic languages, 8, 354.
- Sources of English, 8, 354.
- Style, 8, 368.

Language of Flowers, 1, 197.

Languages Spoken in Europe.— There are 587 different languages spoken in Europe, though philologists look upon numbers of these as merely variations or dialects of about fifty distinct languages which they credit Europe with possessing. The number of persons speaking the seven principal European languages in 1801 and 1890 is as follows:—

	1801.	1890.
English.....	20,520,000	111,100,000
French.....	31,450,000	51,200,000
German.....	30,320,000	75,200,000
Russian.....	30,770,000	75,000,000
Spanish.....	26,190,000	42,800,000
Italian.....	15,070,000	33,400,000
Portuguese.....	7,480,000	13,000,000

The majority of the languages of Europe are derived from the Indo-European or Aryan, the Teutonic branch including German, English, Dutch, Flemish, Swedish, Norwegian, and Danish; the Slav branch including Russian, Polish, Czech, Slovak, Serb, Croat, Slovenian, and Bulgarian; the Celtic including Welsh, Breton, Irish, Gaelic, Celtic, and Manx; the Romance including French, Italian, Spanish, Portuguese, and Rumanian. The non-Aryan languages are those of the Magyars, Finns, Tartars, Turks, Circassians, and Maltese.

Languedoc.— An ancient government of southern France. Capital, Toulouse.

Lanier, Sidney, 12, 55.

Letters of, 1, 88.

Lanoline, 4, 25.

Lansdowne, Marquis of.— Born, 1845. An eminent English politician and statesman.

Lansing.— The capital city of Mich., and seat of the State Agricultural College. Pop. (1900), 16,485.

Lansingburg.— A city on the Hudson River in N. Y., noted for its brush manufactures. Pop. (1900), 12,595.

Lantern Sprats, 4, 365.

"Laocoon."— A famous antique group in the Vatican at Rome.

Laocoon and His Sons, Symbolism of, 2, 185.

Laodicea.— A city of ancient Phrygia, near the river Lycas, so called after Laodicea, queen of Antiochus Theos, its founder. It was built on the site of an older town named Diospolis; destroyed by an earthquake during the reign of Tiberius; captured by the Turks in 1255; again destroyed in 1422 and is now a heap of ruins. Art and science flourished in Laodicea and it was the seat of a famous medical school.

Laomedon.— In Greek legend the son of Illus and Eurydice and father of Priam.

Lao-Tsey, 10, 41.

Laou-Tsze, 10, 148.

Lap-dogs, 4, 21.

Lapis lazuli, 1, 193.

La Paz.— In Mexico, a seaport of Lower California.

Lapithæ.— A people of Thessaly supposed to be the descendants of Lapithes, son of Apollo, celebrated for their wars with the Centaurs. The word is frequently used in books on Greek art, the subject of Lapithæ in combat with Centaurs being a favorite subject of Greek artists.

Lapland.— The extreme northern part of Norway, Sweden, Finland, and Archangel, Russia. Its inhabitants are mainly Lapps, the people from which the country takes its name.

La Plata.— The most important port of the Argentine Republic, and capital of the province of Buenos Ayres.

Lap of Fortune, 14, 74.

La Porte.— The capital of La Porte Co., Ind. Pop. (1900), 7,113.

Lapp, Gwendolen, 1, 250.

Lapp, Jane, 1, 250.

Lapwing.— A plover-like bird with four toes, a crest, and lustrous plumage, belonging to the genus *Vanellus* and family *Charadriidæ*. The bird's name refers to its irregular mode of flight. The best-known specimen is the *V. cristatus*, a common European bird, also called Pewit, from its cry.

Larch, The, 4, 458.

American, 4, 458.

Black, 4, 458.

European, 4, 458.

Larcom, Lucy.— (1826-1893.) An American poetess and story-writer; editor of "Our Young Folks" (1866-74).
referred to, 14, 345.

Lares, Manes, and Penates.— The family or household gods of ancient Rome. They were

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- usually kept on the hearth, but sometimes in a shrine, where they received daily worship from the family which they protected. The public lares were protectors of the state and as such had temples consecrated to their worship.
- Larix Americana**, 4, 458.
Europæa, 4, 458.
- Lark**, *Field*, 4, 174.
Horned, 4, 173.
Meadow, 4, 174.
Prairie, 4, 173.
Shore, 4, 173.
Skylark, 4, 173.
Snow, 4, 173.
- Lark finch**, 4, 184.
Sparrow, 4, 184.
- Larkspur**, 5, 63.
- La Rochelle**, Siege of, 10, 312.
- Larrabee, William Clark**, LL. D.—(1802-1859.) American educator, author, and divine.
- Larynx**, 1, 292.
- La Salle**.—A city of La Salle Co., Ill., on the Illinois River. Pop. (1900), 10,446.
- La Salle, Robert Cavelier**, *Sieur de*, 11, 59; 14, 101.
- Las Salinas**, Almagro defeated at, 11, 39.
- Lassen, Eduard**.—Born, 1830; A noted Belgian composer; author of a number of operas, but best known by his songs.
- Last Supper**, 9, 240.
- Lateran**.—A palace of Rome, named from the family to which it first belonged (Lateranus). The present building dates from the 16th century; such part of the old palace as remains dates from the 3d century. It was taken by Nero from the last owner of the Lateranus family.
- Lathrop, Francis**.—Born, 1849. An American portrait and decorative painter.
- Lathrop, George Parsons**.—(1851-1898.) A journalist and miscellaneous writer; son-in-law of Hawthorne.
- Lath-work**, Measure of, 13, 163.
- Latimer, Hugh**.—(1485(?)-1555.) A celebrated English reformer and prelate; burned at the stake.
- Latimer Case**, 11, 384.
- Latin** decadence, 10, 340.
 element in English, 8, 361.
 fables, 3, 173.
 war, 10, 213.
- Latissimus dorsi muscle**, 1, 275.
- Latona**, 10, 91.
- Laud, William**.—(1573-1645.) A celebrated English prelate, archbishop of Canterbury. Impeached by the Commons, 1640, and executed on Tower Hill, London.
 referred to, 10, 319.
- Laughing-eye and Weeping-eye**, Servian fable, 3, 48.
- Laughing gas**, 5, 175.
gull, 4, 218.
- Launcelot of the Lake**, 3, 439.
- Laundry**, 1, 25.
Conducting a, 7, 417.
Ironing, 1, 30.
outfit, 1, 31.
table, 1, 31.
Supplies, 1, 27.
To make starch, 1, 29.
To soften water, 1, 25.
Water-supply, 1, 25.
- Laurel**, Symbolism of, 1, 198.
- Laurens, Henry**, 11, 246.
- Laurens, John**, 11, 112.
- Laurier, Sir Wilfrid**.—Born, 1841. A distinguished Canadian statesman and premier.
- Lausanne**.—In Switzerland, the capital of the canton of Vaud; a noted educational center, and has a fine cathedral.
- Lava**, 5, 425.
- Lava**, Hindu rhapsodist, 3, 321.
- La Vendée**, Civil war in, 10, 345.
- Lavender**, 5, 63.
Tincture of, 5, 63.
- Laverack setter**, 4, 20.
- Lavigerie, Cardinal**, 10, 385.
- Law** a part of a business education, 13, 85.
Avogadro's, 5, 183.
Bankrupt, 13, 36.
International, 12, 309.
Martial, 12, 332; 13, 146.
of conservation of energy, 5, 171.
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multiple proportions, 5, 171.
Periodic, 5, 185.
of servants in the Colonial period, 1, 130.
Woman under the, 13, 308.
Young man in the, 13, 78.
- Lawn, The**, 1, 37.
- Lawn Hockey**, 6, 277.
- Lawn Tennis**, 6, 221.
- Lawrence**.—(1) The capital of Douglass Co., Kan.; a railway center and the seat of the state university; pop. (1900), 10,862. (2) One of the capitals of Essex Co., Mass., and a leading manufacturing city of New England; cotton and woolen manufactures. Pop. (1900) 62,559.
- Lawrence, Abbott**.—(1792-1855.) An American merchant and politician; U. S. minister to

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- Great Britain (1849-52), and founder of the Lawrence Scientific School at Harvard.
- Lawrence, James**, 11, 246.
- Lawrence, Sir James**, in the Indian Mutiny, 11, 16.
- "**Lawrence**," *The*, 11, 246.
- Laws of Beauty**, 1, 158.
The Twelve Tables, 10, 211.
- Lawton, Henry W.**, 12, 318.
Death of, 12, 186.
- Lawyers, Women as**, 7, 335.
- Lazarus**.—Brother of Mary and Martha of Bethany, near Jerusalem, and friend of Jesus, by whom he was raised from the dead.
- Lead**, 5, 216.
Alloys of, 5, 217.
group of chemical elements, 5, 216.
Properties of, 5, 216.
Salts of, 5, 216.
Source of, 5, 216.
Sugar of, 5, 216.
- Lead ores**, 5, 439.
Carbonate of lead, 5, 439.
Galena, 5, 439.
White lead, 5, 439.
- Lead pencils for drawing**, 7, 266.
Grades of, 7, 266.
To sharpen, 7, 267.
- Leadville**.—The capital of Lake Co., Col., situated about 10,200 ft. above sea-level; noted for its lead and silver mines. Pop. (1900), 12,455.
- Leaf-cutter**, 4, 330.
- Leaf forms**, 4, 396.
Parts of a, 4, 396.
- League of the Three Emperors**, 11, 10.
- Leakage**.—An allowance made for wasting from casks.
- Leander**.—A youth of Greek legend, in love with Hero.
"Leander," *The*, 11, 246.
- Leang dynasty**, 10, 153.
- Learning, Revival of**, 10, 307.
- Lease**, 13, 183.
- Least fly-catcher**, 4, 199.
Sandpiper, 4, 132.
- Leather and Tanning**, Chemistry of, 5, 244.
Buffalo robes, 4, 39.
Chamois, 4, 30.
Deerskin, 4, 30.
Enamel, 5, 248.
Goatskin, 4, 26.
Grained, 5, 247.
Imitation, 5, 247.
Improvements in making, 13, 349.
Morocco, 4, 27.
Patent, 5, 248.
Pebbling, 5, 247.
Rabbit skins, 4, 43.
- Leather and Tanning** — *Continued*.
Shagreen, 4, 15.
Skiving machine, 5, 247.
Skunk skin, 4, 49.
Split, 5, 246.
- Leavenworth**.—The capital of Leavenworth Co., Kan.; a railway, commercial, and manufacturing center. Pop. (1900), 20,735.
- Lebanon**.—A mountain range of Syria, noted for its cedar and other valuable woods, which were highly prized by the Assyrians and the Hebrews for their buildings.
- Lebanon**.—(1) A town in Grafton Co., N. H.; on the Connecticut River. Pop. (1900), 4,965.
(2) The capital of Lebanon Co., Pa. Pop. (1900), 17,628.
- Leblanc process of making soda**, 5, 187.
- Lebrun, Charles**, 9, 262.
- Lecky, William Edward Hartpole**.—Born, 1838. A noted British historian.
- Lecocq, Alexandre Charles**.—Born, 1832. A French composer of light operas.
- Lecompton Constitution**, 11, 384.
- Leconte de Lisle** (CHARLES MARIE RENÉ).—(1818-1894.) A noted French poet.
- Ledger**, 13, 39.
- Ledyard, William**, 11, 112.
- Lee, Ann**, 11, 112.
- Lee, Arthur**, 11, 113.
- Lee, Charles**, 11, 113.
- Lee, Dr.**, at Cambridge, 8, 57.
- Lee, Fitzhugh**, died, 1905.
Sketch of, 12, 55.
- Lee, Francis Lightfoot**, 11, 113.
- Lee, Gideon**, 14, 95.
- Lee, Henry**, 11, 113.
- Lee, Richard Henry**, 11, 113.
- Lee, Robert Edward**, 12, 56.
Birthday of, 13, 98.
- Leech**, 4, 376.
- Leeds**.—In England. A city of Yorkshire, situated on the Aire. It is the largest city of Yorkshire, and the fifth in England. It is the chief center of England's woolen industry. Pop. (1901), 428,953.
- Leeward Islands**.—A group of small islands of the Lesser Antilles, a division of the West Indies. They lie to the southeast of Porto Rico, extending to the group known as the Windward Islands. They belong to Great Britain and are ruled by a governor, federal executive council, and federal legislative council.
- Lefevre, Judge Owen E.**, on early marriages 1, 237.
- Legal separation**, 13, 312.
tender, 7, 463.
cases, 13, 163.
Highest denomination of, 10, 154.

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- Legaré, Hugh Swinton.**—(1789-1843.) An American politician and lawyer.
- Legaspi, Admiral,** 11, 15.
- Legend, Arthurian,** 3, 433.
 Beowulf, 3, 427.
 Buddha, 3, 345.
 Homer, The, 3, 367.
 Kalevala, 3, 401.
 Koran, The, 3, 386.
 Mahabarata, 3, 335.
 Niebelungenlied, 6, 413.
 Ramayana, 3, 319.
 Zoroaster, 3, 360.
- Leggett, Mortimer D.**— A distinguished U. S. volunteer officer during the Civil War; died, 1899.
- Leghorn.**— In Italy, the capital of the province of Leghorn, and the second seaport of the country. It has important manufacturing industries and is popular as a seaside resort. Pop. (1899), about 105,767.
- Leghorn fowl,** 4, 106.
- Legion of Honor.**— An order of France, bestowed for distinguished civil and military services. Instituted, 1802.
- Legislature,** 12, 318.
- Legnano, Battle of,** 10, 275.
- Legs, Exercises for the,** 6, 22.
- Legumes,** 5, 63.
- Lehigh.**— A river in eastern Pa., length about 120 miles. Its valley is rich in anthracite coal.
- Lehmann, Lilli.**— Born, 1848. A noted German operatic soprano.
- Leibnitz, or Leibniz, Baron Gottfried Wilhelm von.**— (1646-1716.) A celebrated German philosopher and mathematician.
- Leicester.**— The capital of Leicestershire Co., England. The leading manufacture is hosiery, but boots and other leather goods are also made. Pop. (1901), 211,574.
- Leicester, Earls of.**—
 (1) SIMON DE MONTFORT.— (About 1208-1265.) English general and statesman. He was a leader in one of the crusades in 1240. His wife was Eleanor, sister of King Henry III. He frequently resisted the king and came to be known as "father of the parliament."
 (2) ROBERT DUDLEY.— (1532-1588.) An English courtier who entertained Queen Elizabeth with great magnificence in his castle at Kenilworth.
 (3) ALGERNON SIDNEY, or SYDNEY.— (1622-1683.) An English patriot. He was beheaded unjustly for alleged complicity in the Rye House Plot.
- Leif Ericson.**— A Norseman, son of Eric the Red, from whence comes the name Ericson. He flourished about 1000 A. D. Having heard of a country over the sea to the west, he set sail with his companions in search of it. He discovered a country which he called Vinland, from the abundance of grape-vines growing there, where he wintered. The spot cannot now be identified, but conjectures point chiefly to New England.
- Leighton, Frederick, Lord.**— (1830-1896.) A noted English painter.
 Works of, 9, 410.
- Leinster.**— One of the four provinces of Ireland. It lies in the southeastern part of the island, and has an area of 7,622 square miles. Pop. (1901), 1,150,485.
- Leipsic, or Leipzig.**— A city in the Kingdom of Saxony. It is one of the principal commercial centers of Germany, the chief city of Saxony, the center of the German book trade, and one of the leading musical centers. Its university ranks third in size of the German universities. Pop., with incorporated suburbs (1901), 455,089.
- Leland Stanford Junior University,** 8, 48.
- Lely, Sir Peter.**— (1618-1680.) A celebrated portrait-painter attached to the court of Charles II. Works of, 9, 275.
- Lemon,** 5, 2.
- Le Moyne, Charles.**— (1626-1683.) (1) A French pioneer and soldier who distinguished himself in the Indian wars in Canada. He was created Sieur de Longueuil by Louis XIV.
 (2) BARON DE LONGUEUIL.— (1656-1729.) A French-Canadian soldier, governor of Montreal and commandant-general of Canada.
- Le Nains, The Three,** 9, 261.
- Length, Metric measures of,** 13, 153.
- Length of Principal Rivers.**— N. America, Mississippi and Missouri (longest in the world) 4,200 miles. S. America, Amazon, 3,600; Europe, Volga, 2,000; Asia, Yenisei, 3,400; Africa, Nile, 3,895; Australia, Murray, 1,700.
- Lenox.**— A town and summer resort in Berkshire Co., Mass. Pop. (1900), 2,942.
- Lenox, James.**— (1800-1880.) A bibliophist and philanthropist, founder of the Lenox Library in New York City.
- Lenox Library.**— A public reference library founded in New York in 1870. The building is on Fifth Ave., between 70th and 71st streets. It contains a museum, art galleries, and library. It has been combined with the Astor and proposed Tilden Library, as the New York Public Library.
- Lens.**— See LIGHT.
- Leo, Emperor,** 10, 238.

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- Leo VIII.**, Pope, 10, 260.
- Leo, the lion**, a constellation, 5, 142.
- Leonard, Mrs. W. A.**, 7, 351.
- Leonidas.**—A king of Sparta, Greece, who was slain at the battle of Thermopylæ, 480 B. C., when, with 300 Spartans and 700 Thespians, he defended the pass against the vast Persian army under Xerxes, 10, 175.
- Leopard**, 4, 75.
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- Leopold III. of Austria**, 10, 276.
- Lepage, Jules Bastien**, 9, 267.
- Lepanto, Battle of**, 10, 307.
- Lepidodendron**, 5, 464.
- Lepidus**, 10, 226.
- Leprosy.**—A deadly disease prevalent in warm countries from time immemorial. Its symptoms are: dusky red or livid tubercles of various sizes on the face, ears, and extremities; thickened state of the skin; a diminution of its sensibility; the falling off of the hair, excepting that of the scalp; hoarse, nasal, or lost voice; ozæna; ulcerations of the surface and extreme fetor.
- Le Sage, or Lesage, Alain René.**—(1668-1747.) A distinguished French novelist and dramatist, best known by his novel "Gil Blas."
- Lese-majesty**, 12, 318.
- Leslie, Frank.**—(Originally Henry Carter.) (1821-1880.) A publisher, founder of "Frank Leslie's Illustrated Newspaper."
- Leslie, Mrs. Frank**, on the American home, 1, 3.
 referred to, 14, 91.]
- Lessee**, 13, 145.
- Lesseps, Ferdinand de.**—(1805-1894.) A French engineer chiefly known by his construction of the Suez Canal. He also organized a company for cutting a Canal through the Isthmus of Panama and the work was begun. The scheme collapsed and De Lesseps was, for the financial irregularities of the company, sentenced to imprisonment. The sentence was not executed.
- Lessing, Gotthold Ephraim.**—(1729-1781.) A famous German poet, philosopher, critic, and controversialist. Of his voluminous writings "Nathan the Wise" is most widely known.
 Works of, 3, 192.
- Lessing, Karl Friedrich.**—(1808-1880.) A German landscape painter of the Düsseldorf school. Many of his paintings illustrate the life of John Huss.
- Lessor**, 13, 145.
- Le Sueur, Eustache**, 9, 262.
- Lethe.**—A river of Hades in Greek mythology. The waters caused those who drank to forget their former existence, 10, 102.
- Leto**, 10, 91.
- Letter of Advice**, 13, 145.
- Letter of Credit**, 13, 145.
 Form of, 13, 245.
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- Letter writing**, 1, 87.
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- Lettering**, Exercises in, 7, 273.
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- Lettuce**, 5, 64.
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 White, 5, 64.
- Le-Tze Ching**, 10, 159.
- Leuctra, Battle of**, 10, 200.
- Leutze, Painter**, 9, 331.
- Lever, Charles James.**—(1806-1872.) A noted Irish novelist.
- Levers**, 5, 262.
- Levulose**, 5, 234.
- Lewes, George Henry.**—(1817-1878.) An English philosophical and miscellaneous writer. He lived with "George Eliot" after 1854, in which year he left his wife.
- Lewes, Battle of**, 10, 263.
- Lewis, Andrew**, 11, 113.
- Lewis, Dio.**—(1823-1886.) A well-known homeopathic physician, a lecturer on hygiene, and an advocate of various methods of physical culture.
- Lewis, Edmonia.**—Born near Albany, N. Y., 1845. A sculptor of African and Indian descent.

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- Lewis Francis.**—(1713-1803.) One of the signers of the Declaration of Independence.
- Lewis, Ida.**—Born at Newport, R. I., 1841. The daughter of the keeper of the Lime Rock Lighthouse; distinguished for her services in life saving.
- Lewis and Clark Expedition,** 11, 246.
- Lewiston.**—A city in Androscoggin Co., Me.; the leading manufactures are cotton and woolen goods. Pop. (1900), 23,761.
- Lexington.**—(1) The capital of Fayette Co., Ky.; the seat of Kentucky University; a commercial and manufacturing center and horse-market; pop. (1900), 26,369. (2) A small town in Middlesex Co., Mass.; noted as the scene of the first blood-shed of the American Revolution; pop. (1900), 3,831. (3) The capital of Lafayette Co., Mo., on the Missouri River; pop. (1900), 4,190. (4) The capital of Rockbridge Co., Va., on the North River; the seat of the Va. Military Institute, and of Washington and Lee University. Pop. (1900), 3,203.
- Lexington (Mass.), Battle of,** 11, 114.
- Leyden, or Leiden.**—A city in the province of South Holland, Netherlands. The birthplace of Rembrandt. It has an important university and library. Pop. (1899), 53,640.
Defence of, 10, 299.
- Leyden jar,** 5, 309.
- Leys, Baron Hendrik.**—(1815-1869.) A noted Belgian painter.
- Liabilities,** 13, 39.
- Libby Prison,** 12, 66.
- Liberalism, Birth of Modern,** 10, 365.
in Europe, Triumph, 10, 378.
- Liberal Republican Party,** 12, 318.
- "Liberator, The."**—A paper started in Boston, in 1831, by William Lloyd Garrison. Its purpose was to advocate the abolition of slavery in the south and it exerted a wide influence in promoting the agitation that culminated in secession and the Civil War. (See GARRISON, WILLIAM LLOYD, 12, 2.)
- Liberia.**—A negro republic on the west coast of Africa; founded by the American Colonization Society in 1822. The society sent about 18,000 persons to this colony. Liberia remained under the rule of the directors of the society until 1847, when the republic was established; area estimated at 48,360 sq. miles; total population, about 1,500,000, mostly natives.
- Liberty Bell,** 11, 114.
- Liberty Cap, Significance of.**—The Cap of Liberty worn in the Roman States in early days by liberated slaves was made like a cowl, according to a coin of Brutus, after the death of Cæsar. It was made of red cloth. After the murder of Cæsar, Brutus and his rebels adopted the red cap as a token of republican sentiments.
- Liberty Enlightening the World.**—A colossal figure made of plates of bronze on an iron framework, occupying a commanding position on Bedloe's Island, New York Bay. It represents a woman, draped in Greek mantle and tunic, holding aloft a torch in her right hand. The height of the statue is 151 feet; the pedestal 155. It was designed by the French sculptor. Bartholdi, as a gift from the people of France to the U. S. The pedestal, designed by Richard M. Hunt, was paid for by popular subscription in the U. S.
- Liberty Gap,** 12, 66.
Pole, 11, 114.
Tree, 11, 115.
- Libra, the Scales,** 5, 143.
- Librarian** an occupation for women, 7, 396.
- Library, Decoration of the,** 1, 15.
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furniture, 1, 15.
How to use a large, 8, 542.
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of Congress, 12, 319.
wall decoration, 1, 15.
- Libyans.**—An ancient maritime nation, inhabiting the north coast of Africa. Previous to the time of Thothmes III. they greatly harassed the Egyptians. They were later crowded back by the Romans and relapsed into barbarism.
- lichens,** 5, 93.
Iceland moss, 5, 93.
Reindeer moss, 5, 93.
- Lichfield.**—A city of Staffordshire, England; it has a fine cathedral dating from the 13th century. The birthplace of Samuel Johnson. Pop., about 8,000.
- Lichfield, Lord,** 10, 381.
- License, High,** 12, 302.
- Li Chi,** 10, 42.
- Licinian Rogations,** 10, 212.
- Licking.**—A river in Ky., about 200 miles in length.
- Lick Observatory.**—On the summit of Mt. Hamilton, in Santa Clara Co., Cal. An observatory founded and endowed by James Lick (1796-1876).
- Licorice, Wild,** 5, 65.
- Lie (Æ), Jonas Lauritz Edemil.**—Born, 1833.
A noted Norwegian novelist, and playwright.
- Lie,** How to deal with the imaginative, 2, 293.
- Lief's voyage of discovery,** 11, 36.
- Lieberich,** 9, 411.

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- Liebig, Baron Justus von.**— (1803-1873.) A celebrated German chemist, and professor of chemistry.
- Liège.**— (1) A province of Belgium. (2) The capital of the province of Liège; noted for its manufacture of firearms, engines, etc., and an important mining center. Pop. (1899), 171,031.
- Lien,** 13, 145.
- Lieutenant-general,** 12, 319.
- Life,** Fitting for, 2, 186.
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 insurance, To succeed in, 13, 136.
 as an investment, 7, 445.
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- Lifeboat, Who Invented It.**—The invention of the lifeboat is claimed for Lionel Lukin, to whom a monument, recording it, has been erected at Hythe, in Kent. A patent was granted to him for it in 1785, but there is no record of any boat having been built from his design. In consequence of the ship "Adventure," with all its crew, being lost at the mouth of the Tyne, in September, 1789, in the presence of thousands of helpless spectators, a reward for a lifeboat was offered by a committee at South Shields, in the County of Durham, and was obtained by Henry Greathead, of that town, for which he also received \$6,000 from Parliament, a gold medal from the Society of Arts and from the Royal Humane Society, and a purse of 100 guineas from Lloyd's Shipping Insurance Company, whose members voted \$10,000 to encourage the building of lifeboats on different parts of the coast. The National Lifeboat Institution was founded in 1824, and has now 304 lifeboats on the coasts of the United Kingdom.
- Life-saving service,** 12, 320.
- Ligaments,** 1, 274.
- Ligamentum nuchæ,** 1, 272.
- Light,** Color, 5, 303.
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 Shadows, 5, 297.
 Sources of, 5, 296.
 Spectrum, 5, 302.
 Speed of, 13, 150.
 Symbolism of, 2, 183.
 Wave theory of, 5, 295.
- Light Brigade, The Charge of.**—At Bala-klava, the famous charge of the Light Brigade (670 men) under Lord Cardigan, on a Russian battery, Oct. 25, 1854. The subject of Tennyson's well-known poem.
- Lighterage,** 13, 145.
- Light-horse Harry,** 11, 115.
- Lights, Candles,** 1, 14.
 for kitchen, 1, 24.
- Lignite,** 5, 455.
- Lignum vitæ,** 5, 3.
- Li-Hung-Chang.**—(1823-1901.) The most noted Chinese statesman of the 19th century. He began life as a hostler in a wayside inn, and rose by his talents to the highest station. After the reverses of the Chinese army in the war with Japan, he was degraded, but was presently made high commissioner, viceroy, and prime minister. He was highly esteemed by General Gordon and General Grant, the latter of whom ranked him as one of the four great statesmen of the world.
- Likin, Chinese tax,** 12, 229.
- Lilac.**—A genus of plants belonging to the order *Oleaceæ*; a native of Persia, and was first brought to Europe by Busbecq. It is one of the commonest ornamental shrubs cultivated in Europe and America, 5, 3.
- Lilium bulbiferum,** 5, 65.
 Canadense, 5, 65.
 candium, 5, 65.
 Catesboei, 5, 65.
 gigantium, 5, 65.
 lancifolium, 5, 66.
 Martagon, 5, 65.
 Philadelphicum, 5, 65.
 superbum, 5, 65.
 tigrinum, 5, 66.
 Washingtonium, 5, 65.
- Liliuokalani.**—Born, 1838. The ex-queen of the Hawaiian Islands, sister of King Kalakaua.
- Lille, formerly L'Isle.**—In France, the capital of the department of Nord; an important fortress and a great manufacturing center; one of the leading French cities. Pop. (1896) of the city, 216,276.
- Lily,** 5, 65.
 American Turk's-cap, 5, 65.
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- Panther, 5, 65.
- Sacred, of Egypt, 1, 201.
- Southern red, 5, 65.
- Swamp, 5, 65.
- Symbolism of the, 1, 198.
- Tiger, 5, 66.
- Turk's cap, 5, 65.
- Washington, 5, 65.
- White, 5, 65.
- Wild orange-red, 5, 65.
- Lily, William.**—(1468-1522.) A renowned English grammarian, and one of the leading Greek scholars of his day.
- Lily of the Valley, The,** 5, 39.
- Lima.**—The capital of Peru, and its most important commercial center. Pop. (1891), 103,556.
- Lime,** 5, 208.
 - Chloride of, 5, 188.
 - Chlorinated, 5, 188.
 - Salts, 5, 209.
 - Slaked, 5, 209.
- Lime-burning,** 5, 444.
- Lime fruit,** 5, 3.
 - tree, 4, 423.
- Limerick.**—The capital of County Limerick, Munster, Ireland. It is an important river port and a town of much historical interest. Pop. (1901), 45,806.
- Limestone,** 5, 443.
- Limitations, Statues of,** 13, 120, 128.
- Limited companies,** 13, 145, 340.
 - liability, 13, 340.
- Limoges.**—In France, capital of the department Haute-Vienne. Celebrated for its porcelain manufactures. Pop. (1901), 84,121.
- Limonite,** 5, 437.
- Lincoln.**—(1) The capital of Logan Co., Ill.; the seat of Lincoln University; pop. (1900), 8,962. (2) The capital of Neb., and of Lancaster Co.; seat of the state university; grain and cattle interests. Pop. (1900), 40,169.
- Lincoln.**—The second maritime county of England; it has important agricultural interests. Pop. (1901), 498,781.
- Lincoln, Abraham.**—Sixteenth President; sketch of, 11, 406.
 - Birthday of, 13, 98.
 - Education of, 8, 61.
 - Influence of manual training on life of, 7, 6.
 - referred to, 14, 22, 31, 102, 152, 156, 158, 200, 263, 406.
- Lincoln, Battle of,** 10, 436.
- Lincoln, Benjamin,** 11, 115.

- Lincoln, Mount.**—A peak of the Rocky Mountains in Col.; a meteorological station occupies the summit. Height, 14,297.
- Lind, Jenny,** 14, 178.
- Linden tree,** 4, 423.
 - American, 4, 424.
 - Downy, 4, 424.
 - European, 4, 424.
- Lindsay, or Lyndsay, Sir David.**—(1490-1555.) A Scottish poet and patriot, a reformer before the Reformation.
- Linear measure,** 13, 147.
- Linen,** 1, 124.
 - Care of, 1, 123.
 - To remove fruit stains from, 1, 124.
 - ink stains, 1, 124.
 - iron rust, 1, 124.
 - To wash, 1, 123.
 - towels, 1, 124.
- Lines, Exercises in drawing,** 7, 270.
- Lineville, Treaty of,** 10, 349.
- Link, Length of, a,** 13, 147.
- Linnæus, Carolus (KARL VON LINNÉ).**—(1707-1778.) A celebrated Swedish botanist and naturalist; founder of the Linnean system in botany.
 - referred to, 14, 11.
- Linnett,** 4, 184.
- Linoleum, Care of,** 1, 107.
- Lion,** 4, 78.
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 - Fur of the, 4, 78.
 - Geographical range of the, 4, 79.
 - Habits of the, 4, 78.
- Lion and the Man,** Turkish fable, 3, 184.
- Lion dog,** 4, 21.
- "Lion's mouth,"** of Venice, 10, 278.
- Lippincott, Mrs. (SARA JANE CLARKE);** pen-name GRACE GREENWOOD.—Born at Pompey, N. Y., 1823. An author and poet.
- Lipton, Sir Thomas,** 14, 100, 281.
- Liquid air engine,** 5, 274.
- Liquidambar,** 4, 456.
- Liquidation,** 13, 145.
- Liquid measure,** 13, 149.
- Lira, Italian,** 13, 154.
- Lisbon.**—The capital of Portugal; it has important commercial interests and is an important steamer terminus. Pop. (1900) 356,009.
 - Earthquake of, 5, 426; 10, 340.
- Lisping,** 2, 112.
- Lister, Sir Joseph (Lord).**—Born, 1827. An eminent English surgeon; discoverer of the antiseptic treatment in surgery.
- Liszt, Franz.**—(1811-1886.) A celebrated Hungarian composer, and one of the greatest pianists the world has known.

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- Litharge**, 5, 216.
- Lithium**, 5, 208.
- Lithuania**.—Formerly a grand duchy in central Europe. In 1501 it united with Poland. It is now a province of Russia.
- Litmus**.—A popular coloring matter obtained from several lichens, but principally from *Lecanora Tartarea*, found in the south of Africa. The chief use is in the detection of acids or alkalies in chemistry. Acids turn blue litmus red, and alkalies turn red litmus blue. The most convenient method of administering the test is by means of strips of blotting-paper saturated with the juice and then dried. Such are called test-papers.
- Littell, Eliakim**.—(1797–1870.) A well-known publisher; founder of "Littell's Living Age."
- Little downy woodpecker**, 4, 177.
- Littlefield, Charles B.**, on "Merit in an Officeholder," 12, 425.
- Little Giant**.—A name popularly given to Stephen A. Douglas.
- Little James**, 11, 44.
- Little Mac**.—A nickname applied to Gen. George B. McClellan, by the soldiers of his army.
- Little Magician**.—A popular name of Martin Van Buren.
- Littlepage, Cornelius**.—A pseudonym used by James Fenimore Cooper when he wrote "Satanstoe."
- "**Little Phil**," 12, 66.
- Little Red Riding-hood**, German fairy tale, 3, 100.
- Little Rock**.—The capital of Arkansas; a railway and industrial center, the seat of several important educational institutes. Pop. (1900), 38,307.
- Little Round Top**.—The name of a high, rocky knob, the struggle for the possession of which occasioned some of the fiercest fighting at the battle of Gettysburg, July 1, 2, and 3, 1863. (See GEORGE G. MEADE.)
- Little Sisters of the Poor**, 14, 375.
- Litré Maximilien Paul Emile**.—(1801–1881.) A French philologist, journalist, and philosopher. After the death of Auguste Comte, he was recognized as the head of the positivist school of philosophy. Elected to the Academy 1871.
 referred to, 14, 257.
- Livermore, Mary A.**—Born, 1821. American writer and lecturer on woman's suffrage, temperance, etc.
 referred to, 14, 109, 116.
- Liverpool**.—In England; the world's chief seaport, and one of its greatest trade centers; it has numerous manufacturing interests and is extensively engaged in shipbuilding and in marine commerce. Pop. (1901), 684,947.
- Liverworts**, 5, 98.
- Living-room** decoration, 1, 15.
 Furniture of, 1, 15.
- Livingston, Brockholst**, 11, 246.
- Livingston, Philip**, 11, 115.
- Livingston, Robert R.**, 11, 246.
- Livingston, William**, 11, 246.
- Livingstone, David**.—Born near Glasgow, Scotland, 1813; died at Chitambo, in central Africa, 1873. A celebrated African explorer and medical missionary.
 referred to, 14, 164, 367.
- Livy (TITUS LIVIUS)**.—Born, 59 B. C.; died, 17 A. D. A celebrated Roman historian, the greatest prose writer of the Augustan period.
- Lizard**, 4, 251.
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- Llama**, 4, 93.
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 Fur of the, 4, 94.
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 Fur of the, 4, 94.
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- Llanos** are vast plains in the north of South America, partly covered with tall luxuriant grass and stocked with large herds of cattle. The llanos resemble the prairies of North America.
- Llewellyn setter dog**, 4, 20.

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- Lloyd's**, 13, 146.
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Home of the, 4, 366.
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- Local government**, 11, 246.
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- Locke, John**.—(1632-1704.) A celebrated English philosopher, founder of the "sensational" school of philosophy. His principal work is his "Essay Concerning the Human Understanding."
referred to, 11, 48.
- Lockhart, John Gibson**.—(1794-1854.) A Scottish author, best known by his biography of his father-in-law, Sir Walter Scott.
- Lock Haven**.—The capital of Clinton Co., Pa. It has a flourishing lumber trade; pop. (1900), 7,210.
- Lockleven Castle**, 10, 443.
- Lockport**.—The capital of Niagara Co., N. Y., on the Erie Canal. Pop. (1900), 16,581.
- Lockwood, Belva A.**, on "If I Were a Girl Again," 1, 254.
- Locofocos**, 11, 385.
- Locomotive**, Invention of the, 5, 396.
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- Locomotives, Famous**, 5, 396.
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- Locusts (Insects)**, 4, 369.
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- Lodestone**, 5, 315.
- Lodge, Henry Cabot**, 12, 320.
- Lodging-house**, Keeping a, 7, 422.
- Loew, Rosalie**, on Women in Business, 7, 435.
- Logan, James**, 11, 59.
- Logan, John Alexander**, 1, 244; 12, 66.
- Log Cabin and Hard Cider Campaign**, 11, 385.
- Loggerhead shrike**, 4, 146.
- Log-rolling**, 12, 320.
- Logwood tree**, 5, 3.
- Lohengrin**.—(1) In German legend, a knight of the Holy Grail; the mythical knight of the swan. (2) The title of an opera by Wagner, first produced, in 1850.
- Lollards, or Lollhards**.—A semi-monastic society whose members devote themselves to the care of the sick and dead. It developed from a society in Antwerp in 1300 who banded themselves together for the burial of the dead. The name was also given to the followers of John Wyclif in England. The Lollards anticipated the fundamental doctrines of Protestantism and Puritanism. For over a century they were subject to severe persecutions. (See WYCLIF, JOHN.)
- Lombards**, 10, 236, 240.
- Lombardy**.—In Italy, a department including the provinces of Milan, Como, Bergamo, Pavia, Sondrio, Brescia, Cremona, and Mantua.
- Lomond, Loch**.—In Scotland; the largest lake of Great Britain; famous for its magnificent scenery.
- London**.—Capital of England; the center of population and the financial and commercial center of the world. Its population (1905), was 4,684,794. It is divided up into twenty-seven boroughs. The houses of Parliament, and the abbey in which the sovereigns are crowned, are located in the borough of Westminster. What is known as the "City," or London proper, comprises an area of about a square mile and includes chiefly the banks, the law courts, and St. Paul's Cathedral.
- London Company**, 11, 41.
James I. annuls charter of, 11, 43.
- London, Great Fire of**, 10, 326.
"Times," 14, 87.
under the Romans, 10, 399.
- London Bridge**.—One is said to have existed in A. D. 978. The first pile of the present bridge was driven in 1824, built by John and George Rennie; opened by William IV. and his queen, Aug. 1, 1831.
- Londonderry**.—(1) In Ireland, a maritime county of Ulster; chief industry, the manufacture of linen. (2) The capital of the county of Londonderry; famous for the successful defense of the Irish Protestants against James II., 1689. Pop. (1901), 39,873.
- London Wall**.—Built by the Romans in 350-369 to inclose the city, which at that time covered 380 acres. It was broken at the time of the Danish invasion, but was restored by Alfred the Great. Parts of it may still be seen, especially in the street in the capital of England known as London Wall.
- Lone Star State**, 12, 320.
- Long, John Davis**, 12, 321.

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- Long-billed wren**, 4, 165.
- Long-eared owl**, 4, 144.
- Long Branch**.—A village in Monmouth Co., N. J., on the Atlantic coast; a fashionable seaside resort. Pop. (1900), 8,872.
- Longfellow, Henry Wadsworth**, 8, 296.
Mode of composing, 8, 266.
- Longimanus**, 10, 188.
- Long Island**.—A large island forming part of the state of N. Y. It is separated from Conn. and from the mainland of N. Y. by Long Island Sound. Length, 118 miles; greatest width, 23 miles; area, 1,682 square miles.
- Long Island, Battle of**, 11, 115.
- Long Island Sound**.—An arm of the Atlantic Ocean which separates Conn. and the mainland of N. Y. from Long Island.
- Longman, Thomas**.—(1699-1755.) A noted London publisher; part owner of Chambers's Cyclopædia, and Johnson's Dictionary.
- Longman, Thomas**.—(1730-1797.) An English publisher, nephew and successor of Thomas Longman.
- Long measure**, 13, 147, 219.
- Long Nine**, 12, 321.
- Long Parliament** (England).—Met Nov. 3, 1640; was forcibly dissolved by Cromwell, April 20, 1660, 10, 319.
- Long's Peak**.—A peak in the Rocky Mountains, Col. Height, 14,270 feet.
- Longstreet, James**.—Sketch of, 12, 67.
- Lönnrot, Dr. Elias**, on the Kalevala, 3, 403.
- Lookout Mountain** (Tenn.), Battle of, 12, 71.
- Loomis, Elias**.—(1811-1889.) An American mathematician and physicist. The author of several standard mathematical works.
- Loon**, 4, 219.
Black-throated, 4, 220.
Red-throated, 4, 220.
- Loosestrife, Yellow**, 5, 20.
- Loquaciousness of children**, 2, 112.
- Loring, William Wing**, 12, 72.
- Lorraine**.—A part of the German empire. Dates back to 855. This tract was ceded to Germany at the peace of 1871. Area, 2,431 square miles; pop. (1895), 524,885.
taken by France, 10, 341.
- Lorraine, Claude**, 9, 262; 14, 96.
- Lory**, a parrot, 4, 209.
Blue, 4, 209.
Red, 4, 209.
- Los Angeles**.—In California, the capital of Los Angeles County; a winter resort and the center of the fruit growing district.
- Lossing, Benson John**.—(1813-1891.) An historian and journalist. Among his works are "Pictorial Field-Book of the Revolution," "History of the United States," and "History of the Civil War in the United States."
- Lot, Story of**, 3, 242.
- Lothair**.—(795?-855.) Emperor of the Holy Roman Empire. Eldest son of Louis le Débonnaire and grandson of Charles the Great, or Charlemagne. In a war with his brothers Louis the German and Charles the Bald, he was defeated in the battle of Fontenay in 841. By the treaty of Verdun he was left in possession of the imperial title and an equitable portion of the empire.
- Loti, Pierre**.—See VIAUD, LOUIS MARIE JULIEN.
- Lotophagi**, 5, 66.
- Lottery**, 11, 115.
- Lotto, Lorenzo**, 9, 251.
- Lotus**, 5, 66.
eaters, 5, 66; 3, 378.
Egyptian, 5, 41.
Sacred flower of Egypt, 1, 201.
- Loubet, Emile**.—A prominent French statesman, born in 1838. He has been in public life continuously since 1876, and in 1899 was elected president of France.
on the secret of success, 8, 125.
- Louis of Bavaria**, 10, 276.
- Louis IX. of France**, 10, 265.
- Louis XI. of France**, 10, 270.
- Louis XII. of France**, 10, 270.
- Louis XIV. of France**, 10, 315, 410.
referred to, 14, 178, 221, 359.
- Louis XV. of France**, 10, 341.
- Louis XVI. of France**, 10, 341.
executed, 10, 344.
- Louis XVIII. of France**, 10, 359, 366.
- Louis the Gentle**, 10, 242.
- Louis II. of Hungary**, 10, 306.
- Louis Napoleon**, 10, 374.
- Louis Philippe**, 10, 373.
- Louisburg**.—On the coast of Cape Breton, Nova Scotia. Built by the French, 1713; taken by the colonists, 1745; restored in 1748; taken by British, 1758. Pop. (1901), 1,588.
- Louisiana**.—One of the Southern States of the U. S. of America. Bounded on the north by Ark. and Miss., east by Miss. and the Gulf of Mex., south by the Gulf of Mex., and west by Tex. It was partially explored by De Soto, Marquette and La Salle, from 1541 to 1682, and was settled by the French about 1700; was ceded by France to Spain in 1763 and retroceded to France in 1800; was a part of the Louisiana Purchase of 1803, and in 1804 was formed into the Territory of Orleans; that portion lying east of the Mississippi River was added in 1810 and the state was admitted to the Union in 1812. It was one of the eleven states which seceded from the Union in 1861;

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- was the scene of much fighting during the Civil War. The most important event was the passing of Forts Jackson and St. Philip, on the Mississippi River, and the immediate capture of New Orleans, by the fleet of Commodore Farragut. The state was readmitted into the Union in June, 1868. The surface is generally level and much of it is low, with many swamps, bayous, rivers, and lakes. Agriculture is the principal occupation, and sugar, rice, and cotton are the staple products. Baton Rouge is the capital, and New Orleans its chief city; Shreveport is the only other town of importance. Area, 48,720 sq. miles; pop. (1900), 1,381,625; nicknamed the Pelican State and the Sugar State.
- Louisiana, District of**, 11, 247.
 Napoleon's sale of, 10, 349.
 Purchase, 11, 197, 247.
- Louisville.**—The largest city of Ky.; an important trade and manufacturing center. Pop. (1900), 204,731.
- Lourdes.**—In France, a town in the department of Hautes-Pyrénées; a noted place of pilgrimage.
- Louvre.**—A palace in Paris now used chiefly as a museum of fine arts. It contains one of the most notable collections of painting and statuary to be found in the world. From the time of the 13th century or earlier it was a castle and was used as a palace by the kings of France until the time of Louis XIV., who built Versailles for the purpose about the beginning of the 18th century. The building itself is of great beauty, having been enlarged and elaborately decorated by successive sovereigns, particularly Louis XIV., Catharine de Medicis, Napoleon I., and Napoleon III.
- Love, Growth of Instinct into**, 2, 1.
 Human, 2, 2.
- Lovejoy, Elijah**, 12, 2.
- Lovelace, Richard.**—(1618-1658.) An English cavalier and poet. In the troublous times he was frequently incarcerated, and some of his most charming love songs were written in prison.
- Love letters**, 1, 89.
 of Indra, 10, 24.
 Omnipotence of, 14, 365.
- Lover, Samuel.**—(1797-1868.) A noted Irish novelist and song writer.
- Low, Seth**, 12, 321.
 on a college education, 8, 139.
- Lowell.**—One of the capitals of Middlesex Co., Mass., at the falls of the Merrimac River. It is a center of cotton and woolen manufacture. Pop. (1900), 94,969.
- Lowell, James Russell.**—(1819-1891.) An eminent American author and diplomat. His home was in Cambridge, Mass., throughout his life. He succeeded Longfellow in 1855 as professor of belles-lettres in Harvard College. Was editor of the "Atlantic Monthly" and "North American Review." He achieved his first fame in poetry, but added to it by his essays and public addresses. He was United States minister to Spain 1877-80, and to England 1880-85. He was highly honored by the English people, who have erected a tablet to his memory in Westminster Abbey.
- Lower Silurian epoch**, 5, 463.
- Lowestoft.**—In Suffolk, England, a seaport and seaside resort.
- Lowlands, or Netherlands.**—The name often given to Holland, a kingdom on the north-western coast of Europe. The name refers to the low altitude of the land, which in many places is below the sea-level. Its capitals are The Hague and Amsterdam. Its struggles for independence against the encroachments of Spain in the 16th century are among the most romantic episodes in the history of human liberty.
- Lowlands**, 10, 299.
- Loyalists**, 11, 52, 116.
- Loyola, Ignatius de** (INIGO LOPEZ DE RECALDE).—(1491-1556.) Founder of a religious order known as the Society of Jesus, 10, 298.
- Lubbock, Sir John.**—Born at London, Apr. 30, 1834. An eminent English scientist, author, statesman and banker. Now Baron Avebury, 8, 1.
- Lübeck.**—One of the ancient free cities of Germany, situated on the River Trave. Lübeck was founded in the 11th century, and was declared a free city in the 12th century. Pop. (1900), 96,775.
- Lubricating oils**, 5, 228.
- Lucca.**—(1) In Italy, a province of Tuscany. (2) The capital of the province of Lucca; noted for its olive oil, its silk, and woolen manufactures.
- Lucca, Pauline.**—Born, 1841. A famous German soprano.
- Lucca della Robbia**, 1, 217.
- Lucerne.**—The capital of the canton of Lucerne, in Switzerland; a favorite resort for tourists.
- Lucerne, Lake of.**—In Switzerland, a lake noted for its magnificent scenery; identified with the legend of William Tell. Length, 23 miles.
- "Lucerne, Lion of."**—A famous piece of sculpture by Thorwaldsen.
- Lucerne**, 5, 64.

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Lucian.—(120(?)-200(?).) A celebrated Greek satirist; author of critical, biographical, and romantic works.

Lucifer.—The morning star; the name given to the planet Venus when it appears before sunrise.

Lucifer matches, 5, 194.

Lucius Sextius, 10, 212.

Lucknow, India.—Once the capital of Oudh, and in 1857 famous as the scene of the relief, by Sir Henry Havelock, of its beleaguered English defenders during the Sepoy rebellion. The town is situated on the Goomti, a tributary of the Ganges, in what is now the North-west Provinces of India.

Relief of, 11, 16.

Lucretius (TITUS LUCRETIVS CARUS).—(96-55 B. C.) A celebrated poet of Rome.

Lucullus.—A Roman general (110-57 B. C.). Served under Sulla in the East, and after serving many years in a military capacity became famous for his wealth. He was also a collector of large means and a patron of learning.

referred to, 10, 219.

Ludovico, 14, 28.

Luini, Bernardino, 9, 243.

Lumbar plexus, 1, 285.

vertebræ, 1, 273.

Lumber, Kiln-dried, 7, 137.

Lumberman, Vocation of, 13, 406.

Lumbo-sacral plexus, 1, 285.

Lump-fish, 4, 283.

Characteristics of, 4, 284.

Habits of the, 4, 284.

Reproduction of the, 4, 284.

Lump-sucker, 4, 284.

Lunar Caustic, 5, 212.

Luncheon, Formal, 1, 52.

Lundy, Benjamin, 12, 2.

Lundy's Lane (Canada), Battle of, 11, 247.

Lüneburg.—(1) In Prussia, a government district in the province of Hanover. (2) The capital of Lüneburg; salt and cement manufactures. Here the first battle of the War of Liberation was fought, in 1813.

Lung-King, 10, 158.

Lungs, Function of the, 1, 292.

Structure of the, 1, 292.

Lungwort, Bullock's, 5, 17.

Lupercal.—A grotto on the Palatine Hill of ancient Rome, supposed to be the den of the she-wolf that suckled Romulus and Remus.

Luray Cave.—A remarkable prehistoric cave in Virginia, discovered in 1878. It abounds in singular objects deposited from the dripping waters; one, the Empress column, is a pure white mass of alabaster 40 feet high, reaching

from the floor to the roof. Another pendant, nearly equal to the Empress in height, vibrates for a minute after being struck; one of the rooms called the Cathedral has a series of 20 slender columns which sound part of the musical scale on being struck successively. Whether Norsemen or Red men were its early inhabitants is not positively known, but many skeletons and implements of antiquity have been brought to light.

Lurcher dog, 4, 19.

"Lusiad," The (*loo'si-ad.*).—The national epic poem of Portugal, by Camoens, published in 1572.

Luther, Martin, 10, 289.

referred to, 14, 13, 188, 267.

Lutherans.—The ecclesiastical followers of Martin Luther, the German reformer. Luther gave to the organization simply the name Evangelical, but his own name has since been incorporated, and the word Evangelical has also been added. They are the state church of Germany, Denmark, Norway, and Sweden, and there are many adherents in the United States. With many differences of doctrine, all branches agree in receiving the Augsburg Confession, and the Apostles, the Nicene, and the Athanasian creeds. They are the chief Protestant denomination of Europe.

Luxembourg, Palace of the.—A palace in Paris completed 1620 for Maria de Medici, but now noted chiefly as a museum of art.

Luxembourg, the hunchback, 8, 16.

Luxemburg.—(1) A province of Belgium; capital, Arlon. (2) A grand duchy of Europe, bounded by France, Belgium, Lorraine, and the Rhine Province of Prussia. Capital, Luxembourg.

Luxor.—A village of Upper Egypt, situated partly upon the site of the ancient Thebes, and celebrated for its antiquities.

Lycæus.—A surname for Jupiter or Zeus in Greek mythology.

Lycia.—An ancient geographical division of Asia Minor, bordering on the Mediterranean Sea. It was conquered by Persia in the 6th century B. C., since which time it has not been independent.

Lycopersicum esculentum, 5, 78.

Lycurgus, 10, 190.

Lydia.—A country in the western portion of Asia Minor bordering on the Ægean Sea. The ancient Lydians are supposed to have invented coin. In the 7th century B. C. it became a powerful empire, bringing into subjection some of the more prosperous of the Greek cities, and forming an alliance with others. In the year 546 B. C. Cyrus con-

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- quered the country, capturing Croesus the king. It was afterward brought under the rule of Alexander the Great and other conquerors in succession. It is now a Turkish province.
- Lye**, 5, 202.
- Lying**, 2, 292.
 A form of boastfulness, 2, 292.
 Cowardliness of, 2, 293.
 Dangers of imaginative, 2, 293.
 How to treat, 2, 253.
 Manual training of value in, 2, 254.
 of the imaginative child, 2, 293.
- Lyly, John**.—(About 1554-1606.) A famous English, dramatist, novelist, and member of Parliament. His chief literary work was "Euphues, or the Anatomy of Wit."
- Lynch, Charles**.—(1736-1796.) A Virginia planter. See **LYNCH LAW**.
- Lynch, Thomas**, 11, 116.
- Lynchburg**.—A city in Campbell Co., Va., on the James River. The chief industry is tobacco manufacture. Pop. (1900), 18,891.
- Lynch Law**, 11, 116.
- Lynn**.—A city in Essex Co., Mass.; noted for its extensive manufacture of leather and of shoes. Pop. (1900), 68,513.
- Lynx**, 4, 72.
 African, Fur of, 4, 72.
 Bay, 4, 71.
 Canadian, 4, 72.
 Characteristics of, 4, 72.
 Common, 4, 72.
 Food of, 4, 72.
 Geographical range of, 4, 72.
- Lyon, Nathaniel**, 12, 72.
- Lyons**.—The third city of France; situated partly on a low-lying peninsula, between the rivers Saône and Rhone and partly on the hill surrounding them. Lyons is the greatest manufacturing center in France. The city was founded 500 B. C. by the Greeks. Pop. (1901), 459,099.
- Lyons, Edmund** (Lord Lyons).—(1790-1858.) Diplomatist and admiral in the British navy. Became commander-in-chief of the navy during the Crimean War.
- Lyra**.—A constellation representing the lyre of Orpheus. Its most brilliant star is the third brightest in the northern hemisphere, 5, 136.
- Lyre bird**, 4, 204.
- Lysander**, 10, 200.
- Lysias**.—A Syrian nobleman who was for a period regent of the kingdom. He fought with Judas Maccabæus and besieged Jerusalem. Was murdered by the populace of Antioch 163 B. C.
- Lysimachus**.—(About 361-281 B. C.) A Macedonian, a renowned general of Alexander the Great. After the death of the latter he became a king. His widening kingdom ultimately included a large part of Asia Minor and Macedonia.
 referred to, 10, 206.
- Lytle, William H.**, 12, 272.
- Lytton, Edward George Earle Lytton Bulwer**, first Baron Lytton.—(1805-1873.) Distinguished English novelist and statesman.
- Lytton, Edward Robert Lytton Bulwer**, first Earl of Lytton. (*Pseudonym* OWEN MEREDITH).—(1831-1891.) An author of great merit and a diplomatist who filled many important positions under the British crown. He was appointed Governor-General of India in 1876.
 referred to, 14, 171.

M

- Maartens, Maarten**.—The pen-name of J. M. H. van der Poorten-Schwarz, a novelist.
- Mabie, Hamilton Wright**.—(1846-). An American author, critic, and reviewer. Among his works are: "My Study Fire," "Under the Trees and Elsewhere," "Short Studies in Literature," "Essays in Literary Interpretation," "Essays on Nature and Culture," "Books and Culture," "Essays on Work and Culture," "The Life of the Spirit," "In the Forest of Arden," "Norse Studies," "William Shakespeare," "A Child of Nature."
- For some years he has been connected with the editorial work of "Outlook."
 on how to remedy defects in education, 8, 85.
 Lincoln, 8, 62.
- Mac Arthur, Arthur**, 12, 72.
- Macaulay, Thomas Babington**.—(1800-1859.) A noted English historian, poet, essayist, and statesman, who is best known by his "History of England." Among his poetical works the "Lays of Ancient Rome" is best known. He also wrote many literary essays and criticisms.

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- Macaw, 4, 209.**
 Hyacinth, 4, 209.
 Scarlet, 4, 210.
- Macbeth.**—A Scottish king who usurped the crown by murdering Duncan 1040. He, in turn, was killed at Lumphanan in 1057.
- Macbeth, David,** Blindness of, 8, 27.
- Macdonald, George, LL. D.**—(1825–1902.) Poet and novelist, who conveys in all his writings the mysticism and inspiration of the Highlands; formerly an independent minister, but for half a century devoted to literature; "Robert Falconer" is perhaps his most popular novel. Among his works are "David Elginbrod," "Alec Forbes," "Annals of a Quiet Neighborhood," "Thomas Ningfield, Curate," "Paul Faber, Surgeon," "Donald Grant," "What's Mine's Mine," "Poems," "Lilith," "At the Back of the North Wind."
- Macdonald, Sir John Alexander.**—(1815–1891.) A noted Canadian statesman and leader of the Conservative party. He was one of the signers of the Washington treaty. His great work was the federation of the Dominion of Canada.
- Macedonia.**—A district of northern Greece, the home of Philip and of Alexander the Great. Philip built up the Macedonian empire and compelled the Greek states to recognize it.
 -Fall of, 10, 208.
 Wars of, 10, 217.
- MacGahan, Januarius Aloysius.**—Born in Ohio, 1844; died at Constantinople, 1878. A journalist and war correspondent. He was correspondent of the "N. Y. Herald" during the Franco Prussian War (1870–71); went on the Prussian expedition against Khiva in 1873; accompanied the Arctic expedition on the "Pandora" in 1875, described in "Under the Northern Lights." In 1876 he began a series of letters to the London "Daily News" on the Bulgarian atrocities.
- Macgregor, or Campbell, Robert.**—See ROB ROY.
- Machiavelli, Niccolo.**—(1469–1527.) An Italian statesman and author. He was noted for astuteness in diplomatic missions.
- Machinery Emancipated Man from Drudgery, Has,** by Carroll D. Wright, 13, 273.
- Machines, Drawing elements and details of, 7, 299.**
 Working drawings of, 7, 290.
- Mackenzie, Alexander.**—(1822–1892.) A Canadian politician. Born in Scotland, removed in 1842 to Canada, premier of Canada 1873–78.
- Mackerel, The, 4, 275.**
 Characteristics of, 4, 275.
 Flesh of the, 4, 276.
- Mackerel, The** — *Continued.*
 Food of the, 4, 275.
 Geographical range of, 4, 276.
 Habitats of the, 4, 275.
 Home of the, 4, 275.
 Skin of the, 4, 275.
 Spanish, 4, 276, 289.
 Spawning of the, 4, 275.
 When found, 4, 275.
- Mackinac.**—A strait which connects Lakes Michigan and Huron, and separates the northern and southern peninsula of Mich. Near it are the island and town of Mackinaw and Fort Mackinac.
- Macleod, Norman.**—(1812–1872.) An eminent divine of the Church of Scotland, noted for his oratory and his writings.
- Maclise, Daniel.**—An eminent British historical painter of Scotch extraction; born in Cork, 1806; died in London, 1870. He was appointed R. A. in 1840, 9, 288.
- Maclure, William, 11, 248.**
- MacMahon, Comte Marie Edme Patrice Maurice de.**—(1808–1893.) A president of the French republic and a marshal of France, 10, 384.
- MacMaster, John Bach.**—Born at Brooklyn, N. Y., 1852. A historian. He became professor of history in the University of Pa. in 1883. He has published "History of the U. S."
- MacMonnies, Frederick William.**—Born at Brooklyn, N. Y., 1863. A noted sculptor, 9, 413.
- Macolm, Howard.**—Born at Philadelphia, 1799; died there, 1879. A Baptist clergyman and writer. Among his writings are "A Dictionary of the Bible," and "Travels in Southeastern Asia."
- Macomb, Alexander, 11, 248.**
- Macon.**—The capital of Bibb Co., Ga., on the Ocmulgee River. A railway, commercial, and manufacturing center, has a large cotton trade. Pop. (1900), 23,272.
- Macon, Nathaniel, 11, 248.**
- Macready, William Charles.**—(1793–1873.) Eminent English Shakespearean actor. He visited the United States in 1826; in 1843–44; and again in 1849.
- MacVeagh, Wayne, 12, 331.**
- Madagascar.**—A large island situated to the southeast of the African coast, separated from the mainland by the Mozambique Channel. Its chief city is Antananarivo. Since 1896, Madagascar has been a French colony. Area, 228,600 square miles.
- Mad Anthony.**—A popular name for Gen. Anthony Wayne, a celebrated American soldier during and after the Revolution. The epithet was applied to him for his reckless daring.

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Madeira Islands.— Situated about 400 miles northwest of the African coast. Grape growing and wine making are the principal industries. Area, 318 square miles. Pop., about 150,574 (1900).

Madison.— (1) The capital of Jefferson Co., Ind., on the Ohio River. Pork-packing is a leading industry; pop., (1900), 7,835. (2) A borough in the township of Chatham, Morris Co., N. J.; the seat of Drew Theological Seminary (Methodist); pop. (1900), 3,754. (3) The capital of Wis., and of Dane Co., between Lakes Mendota and Monona. It has important manufactures; is the seat of the University of Wis.; pop. (1900), 19,164.

Madison, James.— Born in Rockingham Co., Va., 1749; died, 1812. A bishop of the Protestant Episcopal church; president of William and Mary College (1777-1812).

Madison, James.— Fourth President; sketch of, 11, 202.

Madison Square.— A public park in New York City, six acres in extent; bounded by 23d and 26th Sts., and by Fifth and Madison Aves.

Madison Square Garden.— A place of amusement in N. Y. City, remarkable for its great size and for the beauty of its architecture. It contains an amphitheater 300 ft. long and 200 ft. wide, a theater, a concert hall, a dining-hall, and roof-garden. The architecture in the style of the Spanish Renaissance is rendered in yellow brick and terra-cotta. The great square tower which rises from the south side is a reproduction of the famous Giralda at Seville, with the ornament greatly simplified. Its height is 332 ft. to the top of the crowning statue.

"**Madman of the North,**" 10, 332.

Madonna, The Sistene, 9, 236.

Madras.— One of the principal local governments of British India occupying the southern part of the Indian peninsula. It has 21 districts immediately under its supervision; has a population of 38,209,436 and an area of 141,726 square miles. Madras City is its capital. It possesses an important maritime trade and has a population of 452,518.

Madras curtains, 1, 36.

Madrazo, Raymundo de, 9, 258.

Madrid.— The capital of Spain and of the province of Madrid; it has various manufacturing interests. Pop., 470,283.

Mæcenas, Caius Cilnius.— A Roman statesman and noble. He was a patron of literature, and especially befriended Horace. He died, 8 B. C.

Maelstrom.— A whirlpool in the Arctic Ocean off the northern coast of Norway.

Maeterlinck, Maurice, or Mooris.— Born, 1864, A famous Belgian poet.

Maffia, 12, 331.

Magalhães, Fernão de.— (1480-1521.) A Portuguese navigator and the discoverer of Magellan Strait and of the Philippines in 1521 where he was killed by the natives on the island of Mactan.

Magdalen Islands.— A group, 54 miles northwest of Cape Breton near the center of the Gulf of St. Lawrence, and about the same distance north from Prince Edward Island. Pop., 3,172.

Magdeburg.— The capital of Saxony, Prussia, on the Elbe. It is one of the leading commercial cities of Germany, and the center of the sugar trade. Pop., 229,663.

Capture of, 10, 308.

Magenta, Battle of, 10, 379.

Maggiore, Lago.— A large lake of northern Italy, between Italy and Switzerland. It is famed for its picturesque scenery. Its length is 37 miles, and it is 645 feet above sea-level.

Magi.— The priestly caste of ancient Persia. It is also the name given to the "Wise Men" who did homage to Jesus at his birth at Bethlehem.

Magian, 10, 186.

Magic Lantern, 5, 302.

Play with, 2, 131.

Magna Charta.— The great charter of the liberties of England which the barons forced from King John at Runnymede, June 15, 1215, 10, 262.

Magnesia.— An ancient city of Ionia, Asia Minor, 14 miles southeast of Ephesus. It was noted for its beautiful temple of Artemis Leucophryne (Diana). The frieze, representing combats between the Greeks and Amazons, is now in the Louvre.

Magnesium group of chemical elements, 5, 210.

Properties of, 5, 210.

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Sources of, 5, 210.

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Magnets, Electro, 5, 314.

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foetida, 4, 410.

glauca, 4, 411.

grandiflora, 4, 410.

Great-flowered, 4, 410.

Historic, at Charleston, S. C., 4, 411.

Laurel, 4, 411.

White, 4, 411.

Magnolia warbler, 4, 186.

Magnum bone, 1, 274.

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- Magoon, Charles E.**—In October, 1906, appointed provisional governor of Cuba.
Governor of Panama, 12, 179.
- Magoon, Elias Lyman.**—(1810-1886.) A Baptist clergyman and writer. His works include "Orators of the American Revolution" and "Republican Christianity."
- Magruder, John Bankhead**, 12, 73.
- Maguey**, 5, 49.
- Magyars**, 10, 245.
- Mahabharata**, 3, 335.
Date of the, 3, 336.
- Maha Beli**, 10, 12.
- Mahadeva**, 10, 18.
- Maha Kalpa**, 10, 7.
- Mahan, Alfred Thayer.**—Born, 1840. A naval officer and writer. He became midshipman in 1859, lieut. in 1861, lieut.-commander in 1865, commander in 1872, captain in 1885, and retired in 1896. He was made president of the U. S. Naval War College, and lecturer on history, strategics, and tactics. In 1894 he was in command of the "Chicago." Among his writings are "The Gulf and Inland Waters," "Influence of Sea-Power upon History, 1600-1783," "Influence of Sea-Power upon the French Revolution and Empire, 1793-1812," and "Life of Admiral Farragut."
- Mahan, Asa.**—Born at Vernon, N. Y., 1800; died at Eastbourne, England, 1889. A clergyman, educator, and author. He was president of Oberlin College from 1835 until about 1850. He has held similar positions later at Cleveland University and at Adrian College, Mich. Among his works are "System of Intellectual Philosophy," "Science of Logic," and "Critical History of Philosophy."
- Mahan, Dennis Hart**, 11, 385.
- Mahan, Milo.**—(1819-1870.) A clergyman of the Protestant Episcopal Church, brother of D. H. Mahan. His chief work is a "History of the Church."
- Mahdi** (Mohammed Achmet).—The "False Prophet of the Soudan," 1845-1885. Was an Arab fanatic who believed himself to be the true descendant of Mohammed and to be inspired of God. He thought himself empowered to wage a holy war against unbelievers, which led him into a war with England in Egypt, his followers suffering many crushing defeats.
- Mahogany**, a decorative wood, 1, 36.
for wood-carving, 7, 216.
- Mahommed, Life of**, 10, 237.
- Mahone, William**, 12, 73.
- Mahony, Francis.**—(1804-1866.) Irish poet and journalist; pen-name, "Father Prout."
- Mahony City.**—A borough in Schuylkill Co., Pa., the center of a coal-mining region. Pop. (1900), 13,504.
- Mahrattas.**—A famous Hindu confederacy, which had its rise in 1659, and its downfall in 1818, was composed of the several independent tribes ruled at various times by the chiefs Bonsla, Sevajee, Scindia, Holkar, and the Guicowar, of Baroda. Each reigning house had its own distinctive territory, though they all raided, not only over the Deccan, but at times over nearly the whole of Hindostan. The British contests with the Mahrattas occurred during the years 1779-81, 1803-04, and 1817-18. In the latter year the Mahratta power was completely broken. The son of the last reigning rajah, who was a British prisoner in the neighborhood of Cawnpur, was the infamous Nana Sahib, whose connection with the mutiny of 1857 is historic.
- Maia**, 10, 97.
- Maid of Orleans**, 10, 406.
- Maine.**—One of the New England States and the northeasternmost of the states of the American Union. The charter granted by Charles I. of England in 1639 included "the Province or Countie of Mayne," because considered a part of "the Mayne Lande of New England," hence the name. It is bounded on the north by the province of Quebec, Canada, east by New Brunswick, south by the Atlantic Ocean, west by N. H. and Quebec. It was visited by the Cabots and other early explorers, and the first permanent settlement was about 1623; the territory was merged into the "province of Massachusetts Bay" in 1691; was admitted into the Union as a state in 1820; a dispute with England as to the northern boundary was not settled till 1842. The surface is generally hilly, and in the northern part mountainous; Mount Katahdin is the highest summit; the coast line is much indented with bays; the chief industries are ship-building, lumbering, fishing, commerce, and agriculture; in the winter ice is cut and shipped in large quantities; second state in the Union in the value of its fisheries. It has 16 counties; the capital is Augusta and the chief city, Portland; other chief towns are Lewiston, Biddeford, Bangor, Auburn, and Bath. Area, 33,040 sq. miles; pop. (1900), 694,466. It is called the Pine Tree State. The "Maine Law," passed in 1851, was the first attempt to prohibit the sale of intoxicating liquors.
- "Maine," The**, 12, 331.
- Maintenon, Françoise d'Aubigné.**—(1635-1719.) Born in prison at Niort, but when 16

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years of age met the poet Scarron, who, struck by her beauty, intelligence, and helpless condition, married her. On his death in 1660 she was reduced to great poverty. In 1664 she was intrusted with the education of two sons whom Mme. de Montespan had borne to Louis XIV., and such was her vigilance that she soon became acquainted with the king, fascinating him. She was privately married to Louis XIV. in 1684, about 18 months after the death of the queen. On the death of the king she retired to the Abbey of St. Cyr, where she died.

referred to, **10**, 411.

Mainz, or **Mayence**.—The most strongly fortified city in the German empire, situated in one of the most fertile wine-producing districts of Germany. It stands on the left bank of the Rhine near the junction of the Main. Pop., 72,934.

Maistre, Joseph Marie, Comte de.—(1754–1821.) Celebrated French statesman, philosopher, and author.

Maize.—A grass, native to America where it was found in cultivation by Columbus, by whom it was taken to Spain. The product of the U. S. for the year 1900 was 2,105,102,516 bushels, valued at \$715,720,034, **5**, 83.

Majolica factories, Most celebrated, **1**, 218.

Renaissance, **1**, 218.

ware, **1**, 215.

how made, **1**, 217.

Majorca.—The largest island of the Balearic group; 107 miles southeast of the mouth of the Ebro and 171 miles north of Algiers. Its length is 64 miles, width, 48 miles; area, 1,386 sq. miles. Pop., 262,900.

Majuba Hill.—A height in the Drakenberg Mountains, South Africa. Here Feb. 27, 1881, Gen. Sir George P. Colley with a force of 700 British troops were defeated by about 450 Boers.

Making a life, **8**, 1.

Malabar.—A maritime district in the presidency of Madras, British India. Area, 6,050 sq. miles. Pop., 2,365,035.

Malacca.—A British maritime province on the southwest coast of the Malay Peninsula, 40 miles long, and including the district of Naning 25 miles wide. Area, 1,000 sq. miles. Pop., 95,487.

Malachite, **5**, 439.

Malaga.—A city and seaport of Spain, capital of a province of the same name, famous for its wines. It is estimated that the vineyards of Malaga produce annually from 35,000 to 40,000 pipes of wine of which 27,000 pipes

are exported. It was founded by the Phœnicians and has enjoyed a commercial importance for 3,000 years. Pop., 134,016.

Malar bones, **1**, 273.

Malay Archipelago.—A large and important island group, bounded on the north by the China Sea, on the east by the Pacific Ocean, and on the south and west by Australia and Indian Ocean. The principal groups are the Sunda Islands, including Sumatra and Java; the Philippines, ceded by Spain to the U. S. in 1898; Celebes and the Salayer Islands, and the Moluccas. Native rajas rule most of the islands, but Great Britain possesses some of them, while the Dutch East Indies include the greater and richer portion of the Archipelago, with rights of suzerainty over the native princes.

Malay Peninsula.—One of the world's most important commercial centers. Bounded on the north by lower Siam; east and south by the Lower China Sea, west by the Malacca Strait. Its chief city is Singapore.

Malayan fowl, **4**, 106.

Malcolm, Sir John G. C. B.—(1769–1833.) British historian and statesman; distinguished at the siege of Seringapatam 1792.

Malden.—A city in Middlesex Co., Mass., on the Malden River; pop. (1900), 33,664.

Malebranche, Nicolas.—(1638–1715.) A French metaphysician of the general school of Descartes, but who rejected the latter's dualistic theory of mind. He taught that God is the real ground of existence and of thought. His chief work is entitled "Search for Truth."

Malesherbes (mäl-zärb'), **Chrétien Guillaume de Lamoignon de**.—(1721–1794.) A French statesman who served in various offices under Louis XVI. In the revolution he was accused of treason, condemned by the tribunal, and suffered death by the guillotine.

referred to, **10**, 341.

Malibran, **14**, 25.

Malic Acid, **5**, 231.

Mallard duck, **4**, 110.

Eggs of the, **4**, 114.

Nest of the, **4**, 114.

Mallock, Wm. H.—(1849–.) A brilliant Oxford man who flashed into fame with "The New Republic" (1876), a satire on the leading thinkers of the day; has since written much in philosophy, economics, travel, fiction, verse; a keen though perverse thinker, an incessant opponent of Socialism and scientific scepticism.

Malone.—Capital of Franklin Co., N. Y., on the Salmon River; pop. (1900), 5,935.

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- Malone, Edmund.**—(1741-1812.) An Irish scholar and critic, noted chiefly for editing the works of Shakespeare.
- Malory, Sir Thomas.**—(About 1430-1470.) Famous as the author or compiler and translator of the prose romance of "Morte Arthure," which treats of the life and death of King Arthur and the knights of the Round Table.
- Malplaquet.**—A village in the department of Nord, France, near the Belgian frontier. It was the scene of a victory in 1709 of the allied English, Dutch, and Austrian armies over the French.
- Malta.**—An island 17 miles long, nine miles wide, with an area of about 115 square miles, situated in the Mediterranean. It is a British possession and has a population of about (1905), 202,134.
acquired by England, 10, 360.
- Maltese spaniel,** 4, 21.
terrier, 4, 21.
- Malthus, Thomas Robert.**—(1766-1834.) Church of England clergyman and author of "Essay on the Principles of Population as it Affects the Future Improvement of Society."
- Malvern Hill (Va.).**—The scene of a desperate fight between the Army of the Potomac and the Confederate forces, July 1, 1862.
Battle of, 12, 74.
- Mamelukes.**—An Arabic word meaning slaves. The name given in Egypt to the servants of the beys, who constituted their armed force.
- Mammalia,** Characteristics of, 4, 10.
- Mammals,** Temperature of the blood of, 4, 95.
- Mammoth Cave.**—The largest known cave in the world, in Edmondson Co., near Green River, Ky., 75 miles southwest of Louisville. It extends over an area of about ten miles in diameter, and consists of numerous chambers, connected by avenues, which are said to aggregate 150 miles in length. It contains a river with eyeless fish. The stalactites are of great beauty.
- Mammoth trees** of California, 4, 466.
- Man and his Shadow,** Russian fable, 3, 209.
- Man and the Snake,** French fable, 3, 189.
- Man and the Weasel,** Latin fable, 3, 174.
- Man,** Races of, 10, 147.
- Manassas (Va.), Battle of,** 12, 74.
- Manasseh,** 10, 184.
- Manchester.**—(1) A town in Hartford Co., Conn., 7 miles east of Hartford. It has silk and paper manufactures; pop. (1900), 10,601. (2) One of the capitals of Hillsborough Co., N. H., on the Merrimac River. It is the largest city in the state and has extensive and important cotton and woolen manufactures.
- Manchester.**—The chief cotton-manufacturing city of England. Pop., with suburbs, about 700,000.
- Manchuria.**—A dependency of China, lying on the northeastern boundary of China proper. Its political importance is largely due to the fact that it is coveted by Russia for the needs of the Siberian railway.
- Manchus seize Peking,** 10, 159.
- Mandalay.**—The capital of Burmah, is situated 3 miles from the Irrawaddy River. It was captured by the British in 1885. Pop., (1901) 183,816.
- Mandan Indians.**—A tribe of the Sioux stock which was almost exterminated by small-pox in 1837. The survivors now number about 250 and live on the Fort Berthold reservation in N. Dakota.
- Mandara,** 10, 10.
- Mandeville, Sir John.**—(1300-1372.) A credulous English traveler, who for 33 years traveled in Europe, Asia, and Africa and after returning to England wrote his experiences in English, French, and Latin. His works are of little value either as descriptive or historic geography.
- Mandragora,** 5, 67.
- Mandrake,** 5, 67.
Symbolism of the, 1, 199.
- Mandrill,** 4, 65.
- Manetho.**—A celebrated Egyptian historian, a native of Sebennytus, who flourished 275 B. C.
- Manganese,** group of elements, 5, 222.
Salts of, 5, 222.
Source of, 5, 222.
- Mange.**—A disease, somewhat similar to the itch, which affects horses, dogs, and cattle. Minute mites burrow in the skin and cause irritation, heat, and itching, accompanied by falling of the hair. Cleanliness, sulphur, mercurial ointment, and alterative, cooling medicine are indicated.
- Mango.**—A genus of trees, native to India, which produces a smooth kidney-shaped fruit, in some cases as large as an orange, of a luscious, sweet, or slightly acid, taste. The fruit is a favorite dessert, 5, 3.
- Mangrove,** 5, 3.
- Mangu,** 10, 157.
- Mangum, Willie Person.**—(1792-1861.) A Whig politician. He was U. S. senator from N. C. (1831-36 and 1840-53.)
- Manhattan Island.**—An island at the mouth of the Hudson, between that river on the west, the East River on the east, Spuyten Duyvil Creek and Harlem River on the north, and New York Bay on the south. It forms the principal part of New York City. Greatest width, 2¼ miles. Area, about 22 sq. miles.

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- Manicheans.**—The followers of Mani, Manes, or Manichæus. The theological system endeavored to combine the essential features of Buddhism, Zoroastrianism, and various other religions with Christianity. It originated in the third century in Babylonia, and spread through Persia and especially the north of Africa, where it developed a form of Gnosticism. Its theology was dualistic, holding to the conflict between light and darkness, and believing in the inherent evil of matter. Its morals were theoretically ascetic. Manicheism is believed to have been influential in the development of the monastic system.
- Manifest, 13, 146.**
- Manifesto, Ostend, 11, 322.**
- Manila.**—The capital of the Philippine Islands, situated on Manila Bay, Luzon Island. It exports large quantities of cigars and hemp.
- Manila, Battle of, 12, 251.**
- Manila Harbor, Battle of, 12, 332.**
- Manila rope, 4, 481; 5, 87.**
- Manistee.**—(1) The capital of Manistee Co., Mich., on Lake Michigan. It has the largest shingle manufactures in the world; pop. (1900), 14,260. (2) A river in Mich., flowing into Lake Michigan at Manistee. Length, about 130 miles.
- Manito, or Manitou.**—A spirit worshiped by certain tribes of American Indians. There are two preëminent Manitous, one the spirit of good, the other the spirit of evil. (See LONGFELLOW'S "HIAWATHA," Canto xiv.)
- Manitoba.**—A province of Canada lying north of Minnesota and North Dakota. It is noted for its wheat.
- Manitou.**—A town and summer resort at the foot of Pike's Peak, Col., noted for its mineral springs.
- Manitou.**—A spirit or other object of religious reverence among certain tribes of the American Indians.
- Manitoulin Islands.**—A group of islands in the northern part of Lake Huron. They belong to Ontario, with the exception of one, Drummond Island, which belongs to the state of Michigan.
- Manitowoc.**—The capital of Manitowoc Co., Wis., on Lake Michigan, at the mouth of the Manitowoc River. Pop. (1900), 11,786.
- Mann, Horace, 12, 332.**
- Manna, 5, 4.**
- Manna, Ash, 5, 4.**
- Manner, Emerson quoted on, 2, 474.**
 Habit of respectful attention, 2, 478.
 Power of a pleasant, 2, 475.
 Pride in being "plain-spoken," 2, 477.
- Manners, Good table, 2, 304.**
 Patience required in teaching, 2, 305.
 taught best by example, 2, 303.
 Training in, 2, 216.
- Mannheim, or Manheim.**—A city and important commercial center of Baden, Germany. It has extensive manufacturing interests. Pop. (1890), about 80,000.
- Manning, Daniel.**—Born at Albany, N. Y. 1831; died there, 1887. A Democratic politician, Secretary of the Treasury (1885-87).
- Manning, Henry Edward.**—(1808-1892.) A noted English cardinal; author of several religious works.
- Manor, 13, 146.**
- Mansfield.**—The capital of Richland Co., Ohio; an industrial and railroad center. Pop. (1900), 17,640.
- Mansfield (La.), Battle of, 12, 75.**
- Mansfield, Joseph King Fenno, 12, 75.**
- Mansfield, Mount.**—A peak of the Green Mts., Vt.; height, 4,070 feet.
- Mansfield, Richard.**—Born in Helgoland, 1857. A prominent American actor.
- Manshan.**—The largest of the Elizabeth Islands situated northwest of Martha's Vineyard, Mass.
- Mantegna, Andrea, 9, 219.**
- Mantineia.**—An ancient city of Greece, situated in Arcadia, southwest of Corinth. It was the scene of several battles, the most famous of which was fought in 362 B. C., when Epaminondas leading the Thebans defeated the Spartans and their allies, 10, 201.
- Manual Training as a Factor in Education, 7, 1.**
 at Pratt Institute, 7, 1.
 Drawing, Mechanical, 7, 259.
 Rudimentary, 7, 239.
 Making a sail-boat, 7, 232.
 Mechanical drawing, 7, 259.
 meets changed conditions, 4.
 Modeling, 7, 239.
 not training of the hand alone, 7, 2.
 on lives of great men, Influence of, 7, 5.
 Picture frames, 7, 235.
 provides the ideal school, 7, 8.
 should enter all schools, 7, 3.
 Sled, making a, 7, 230.
 Suggestions to parents, 7, 8.
 Value of, 2, 292.
 in overcoming lying, 2, 254.
 Wood-carving, 7, 215.
- Manufacturing, Conditions of success in, 13, 285.**
- Man with the Iron Mask.**—A famous French prisoner, confined in the Bastille and other prisons, during the reign of Louis XIV. His

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identity was never disclosed, he wore constantly an iron mask covered with velvet; died in the Bastille.

Manzanillo.—A seaport of Cuba; exports coffee, sugar, and other tropical products.

Maoris.—The primitive people of New Zealand; members of the Malay family, a capable and vigorous race.

Maple, 4, 405.

Black, 4, 405.

Blood-leaved, 4, 408.

Great, 4, 409.

Japanese, 4, 408.

Norway, 4, 407.

Red, 4, 407.

Red-flowered, 4, 407.

Silver, 4, 406.

Striped, 4, 406.

Sugar, 4, 405.

White, 4, 406.

White variegated leaf, 4, 409.

wood in decoration, 1, 37.

Maple Sugar, 4, 408.

Marabon Stork, 4, 227.

Maracaibo, or Maracaybo.—In South America, a seaport of Venezuela and a leading commercial city.

Maraschino, 4, 471.

Marat, Jean Paul.—(1744-1793.) A noted French revolutionist; assassinated by Charlotte Corday.

referred to, 10, 344, 421.

Marathon.—A plain, 18 miles from Athens, in Attica, Greece. It is noted for the battle fought here in 490 B. C. between the Greeks—numbering 11,000 under Miltiades—and the Persian army of 100,000 under Datis and Artaphernes; in which the Persians were defeated and the conquest of Greece as planned by Darius was frustrated.

Battle of, 10, 195.

Marble, 5, 449.

Black, 5, 450.

Brown, 5, 450.

Brecciated, 5, 451.

Brocade, 5, 451.

California, 5, 450.

Carrara, 5, 450.

Cave, 5, 452.

dust, 5, 454.

Fire, 5, 452.

Formation of, 5, 453.

Landscape, 5, 453.

Lumachella, 5, 451.

Parian, 5, 450.

Pentelic, 5, 450.

Quarrying, 5, 453.

Sawing, 5, 453.

Marble—Continued

Shell, 5, 451.

Sienna, 5, 451.

Stone lillies, 5, 452.

Sugar-loaf, 5, 450.

Tennessee, 5, 451.

Variegated, 5, 451.

Wheelstone, 5, 452.

White, 5, 450.

Yellow antique, 5, 451.

Marblehead.—In Massachusetts, a seaport and summer resort; it has boot and shoe manufactures and a noted fishing industry.

Marbles, The Elgin, 9, 359.

Marceaux, René de Saint, 9, 402.

Marcellus, Marcus Claudius.—A famous Roman general who fought with success in the Second Punic War against Hannibal. He was slain in a skirmish in 208 B. C.

March, 13, 102.

March, Francis Andrew.—Born at Milbury, Mass., 1825. A philologist and Anglo-Saxon scholar. He became professor of the English language and comparative philology at Lafayette College (Easton, Pa.) in 1858. His writings include "Method of Philological Study of the English Language" and "Comparative Grammar of the Anglo-Saxon Language."

March to the Sea, 12, 75.

Marconi, Guglielmo.—An Italian electrician and physicist, born at Bologna, 1874. He is celebrated for his system of wireless telegraphy, which was first tested in England in 1896. Was educated at Leghorn and Bologna University; mother an English woman. His patents will revolutionize telegraphy. He has succeeded in sending a message 1,551 miles; and 2,000 miles of signal. His chief experiment station is at Sydney, Cape Breton.

Development of wireless telegraphy by, 5, 323.

Marcus Aurelius, 10, 228.

Marcy, Mount.—(Named from W. L. Marcy.) The highest summit of the Adirondacks, N. Y., in Keene, Essex Co. Height, 5,345.

Marcy, Randolph Barnes, 12, 76.

Marcy, William Learned, 11, 248.

Marden, Orison Swett, on "What Shall I Do?" 13, 261.

Mardi Gras, 13, 98.

Mardonius, 10, 188, 194.

Marduk, 10, 54.

Mare Island.—An island in San Pablo Bay, western Cal.; near San Francisco. It contains the U. S. navy yard.

Marengo.—A small village 3 miles from Alessandria, Italy, where, in 1800, Napoleon com-

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- pleted the conquest of northern Italy, by defeating the Austrians, **10**, 349.
- Margaret.**—
1. MARGARET OF ANGOULÊME, or OF ANJOU, or OF VALOIS, or OF NAVARRE.—(1492–1549.) Queen of Navarre, for a time favorable to Protestantism, and later abandoned it. Famous as a patroness of literature, and author.
 2. MARGARET OF ANJOU.—(1430–1482.) Queen consort of Henry VI. of England. Upon the insanity of her husband, the struggle between her and the Duke of York for the regency, was the beginning of the disastrous Wars of the Roses. Her husband died in the Tower, her son, the heir apparent, was slain, and she herself was captured, and was released only upon her renouncing all claims to the throne. Louis XI. paid her ransom and she returned to France.
 3. MARGARET OF AUSTRIA.—(1480–1530.) Regent of the Netherlands from 1507 to her death.
 4. MARGARET OF AUSTRIA, or OF PARMA.—(1522–1586.) Regent of the Netherlands from (1559–67).
 5. MARGARET OF BURGUNDY.—(1446–1503.) Sister of Edward IV. of England, wife of Charles, Duke of Burgundy. She was a patron of Caxton, the famous printer.
 6. MARGARET OF SCOTLAND.—(About 1425–1445.) Daughter of James I. of Scotland and wife of Louis (later Louis XI.) of France.
 7. MARGARET OF VALOIS, or OF FRANCE.—(1553–1615.) Daughter of Henry II. and Catharine de' Medici, and wife of Henry of Navarre. This marriage made possible the massacre of St. Bartholomew, **10**, 295, 410.
 8. MARGARET TUDOR.—(1489–1541.) Daughter of Henry VII. of England, queen of James IV. of Scotland, and mother of James V. of Scotland.
- Maria de' Medici.**—(1573–1642.) The daughter of Francis I. Grand Duke of Tuscany, was the second wife of Henri IV. of France.
- Maria Louisa**, **10**, 427.
- Mariana.**—The name given by a colonist, John Mason, to the territory granted to him between the Salem River and the Merrimac.
- "Maria Teresa," The**, **12**, 332.
- Maria Theresa.**—(1717–1780.) Empress of Germany. Her claim was the cause of the War of the Austrian Succession, **10**, 336, 410, 414.
- Marie Antoinette de Lorraine.**—(1755–1793.) The wife of Louis XVI. of France and daughter of Maria Theresa. In 1792 during the French Revolution she was imprisoned in the Temple. On Oct. 16, 1793, she was executed, **10**, 413.
- Marie de France**, French fable writer, **3**, 185.
- Marietta.**—The capital of Wash. Co., Ohio, at the junction of the Muskingum and Ohio rivers. It is the seat of Marietta College, founded in 1835. Pop. (1900), 13,348.
- Marine, Merchant**, **12**, 333.
Secretary of, **11**, 248.
- Marine Corps**, **10**, 116.
- Mariner's Compass**, **5**, 324.
linear measure, **13**, 147.
- Marion.**—The capital of Marion Co., Ohio. Pop. (1900), 11,862.
- Marion, Francis**, **10**, 116.
- Mariposa Estate**, **11**, 385.
- Mariposa.**—(1) A county in the central part of Cal., in which are the Yosemite Valley and the Big Tree Grove. (2) Mariposa Grove. A grove of gigantic trees in Mariposa Co., Cal.
- Maris, James**, **9**, 328.
- Maris, Willem**, **9**, 328.
- Marius**, **10**, 218.
- Marjoram**, **5**, 66.
Pot, **5**, 66.
Sweet, **5**, 66.
- Market, Falling**, **13**, 117.
meats, To select, **1**, 109.
Ordering without seeing goods, **1**, 108.
Vegetables and meats, **1**, 108.
- Marketing**, **1**, 108.
Choice of a caterer, **1**, 109.
- Mark, German**, **13**, 154.
- Markham, Edwin**, Advice to authors, **8**, 234.
Poetry in America, **8**, 242.
Mrs. Edwin, "If I Were a Girl Again," **1**, 254.
- "Mark Twain,"** Life of, **8**, 324.
"Getting a Position," **13**, 70.
- Marlborough.**—A town in Middlesex Co., Mass. It has boot and shoe manufactures. Pop. (1900), 13,609.
- Marlborough, Duke of**, **2**, 475; **10**, 327, 444.
- Marlowe, Christopher.**—(1565–1593.) An English dramatist.
- Marmion Case**, **11**, 385.
- Marmora, Sea of.**—A small sea between European and Asiatic Turkey. It is connected with the Ægean Sea by the Straits of Dardanelles and with the Black Sea by the Bosphorus or Strait of Constantinople.
- Marmoset**, **4**, 66.
Story of a, **4**, 66.
- Marpessa**, **10**, 99.
- Marque, Letters of**, **13**, 145.
- Marquette.**—The capital of Marquette Co., Mich.; it exports iron ore. Pop. (1900), 10,058.
- Marquette, Jacques.**—Born at Laon, France, 1637; died near Lake Michigan, 1675. A Jes-

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- uit missionary and explorer in America. He accompanied Joliet in his voyage down the Wisconsin and Mississippi rivers, and up the Illinois River in 1673. He died while attempting to establish a mission among the Illinois Indians. He wrote an account of the expedition of 1673, entitled "Voyage et découverte de quelques pays et nations de l'Amerique Septentrionale."
- Marr, Carl.**—Born at Milwaukee, Wis., 1859. A figure-painter. He studied at Berlin and at Munich. Among his works are "The Mystery of Life," "The Flagellants," and "1806 in Germany."
- Marriage**, Education of girls for, 2, 433.
 help or hinder? Does early, 1, 231.
 laws of England, 1, 4.
 Legal aspect of, 13, 312.
 Practical training for, 2, 39.
- Married women**, Rights of, 13, 313.
- Marryat, Florence.**—(1837-1899.) An English novelist, daughter of Frederick Marryat.
- Marryat, Frederick.**—(1792-1848.) The English sailor and novelist. Best known as the writer of "Peter Simple," "Midshipman Easy," etc.
- Mars**, the God, 10, 98.
 the planet, 5, 130.
- Marseilles.**—The foremost seaport of France and the most important on the Mediterranean. Pop., 442,239.
- Marsh, George Perkins.**—Born at Woodstock, Vt., 1801; died at Vallombrosa, Italy, 1882. A philologist, diplomatist, and politician. He was member of Congress from Vt. (1842-49); and U. S. minister to Turkey (1849-53) and to Italy (1861-82). His works include "Compendious Grammar of the Old Northern or Icelandic Language," "Lectures on the English Language," and "Origin and History of the English Language."
- Marsh, Othniel Charles.**—(1881-1899.) A distinguished paleontologist, professor at Yale University since 1866. His special study is the extinct vertebrates of the U. S. Among his writings are "Odontornithes; a Monograph on the Extinct Toothed Birds of North America," and "Dinocerata; a Monograph on an Extinct Order of Gigantic Mammals."
- Marshall.**—(1) The capital of Calhoun Co., Mich., on the Kalamazoo River; pop. (1900), 4,370. (2) The capital of Harrison Co., Tex.; pop. (1900), 7,855.
- Marshall, Humphrey**, 12, 332.
- Marshall, John**, 11, 386.
- Marshall Pass.**—A noted pass in the Cordilleras of Col. It is traversed by railway. Height, 10,841 feet.
- Marshalltown.**—The capital of Marshall Co., Iowa, on the Iowa River. Pop. (1900), 11,544.
- Marsh-gas**, 5, 228.
- Marsh-hawk**, 4, 140.
- Marsh-hen**, 4, 130.
 Salt-water, 4, 131.
- Marshmallow**, 5, 67.
- Marsh's test of arsenic**, 5, 197.
- Marston, Philip Bourke.**—(1850-1887.) An English essayist, poet, and novelist. He was blind from early boyhood.
- Marston Moor.**—The scene of a battle between Cromwell's "Ironsides" and the Royalist troops, near York, England, in 1644, in which the Royalists were defeated, 10, 321.
- Marsupialia**, 4, 11.
- Marsyas**, 10, 92.
- Martel, Charles**, 10, 236.
- Martha's Vineyard.**—An island southeast of Mass., to which it belongs. It forms the chief part of Duke's Co., is separated from the mainland by Vineyard Sound (about 5 miles wide), and is a summer resort.
- Martial law**, 12, 332; 13, 146.
- Martin**, 4, 198.
 Bee, 4, 198.
 Purple, 4, 192.
- Martin, Alexander**, 11, 117.
- Martin, François Xavier**, 11, 392.
- Martin, Homer D.**—(1836-1897.) A landscape painter. He was elected national academician in 1875, 9, 331.
- Martin, Luther**, 11, 117.
- Martineau, Harriet.**—(1802-1876.) An English authoress who has achieved great distinction in spite of her deafness from early youth. She did successful work in attempting to popularize political economy.
 quoted on jealousy, 2, 277.
- Martinmas**, 13, 101.
- Martinsburg.**—The capital of Berkeley Co., West Va. Pop. (1900), 7,564.
- Martyrs, English**, 10, 439.
- Marvell, Andrew.**—(1620-1678.) An English writer and politician, and assistant-secretary to Milton.
- Marvel of Peru**, 5, 59.
- Mary.**—1. MARY, the mother of Jesus, usually called the "Virgin Mary." According to the narrative of the gospels, Jesus was conceived by the Holy Ghost. She was married to Joseph, a carpenter, and lived in the village of Nazareth. The Roman Catholic Church holds the doctrine of the immaculate conception and the consequent sinlessness of Mary. She is called the "Madonna" in art.
 2. MARY I. (TUDOR).—(1516-1558.) Queen of England, daughter of Henry VIII. and

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Catharine of Aragon. She is known as "bloody Mary" from her persecution of heretics, about 300 of whom were burned at the stake during her reign. She also approved the execution of Lady Jane Grey, her rival claimant of the throne, 10, 301, 439.

3. MARY II.—(1662-1694.) Queen of England. She wedded William of Orange, with whom she sided in the struggle against her father, James II.

4. MARY (STUART) QUEEN OF SCOTS.—(1542-1587.) A claimant to the throne of England in opposition to Queen Elizabeth. She wedded the French dauphin (Henry II.) after whose early death she wedded Lord Darnley, the next heir after herself of the English throne. Darnley's participation in the murder of her favorite, Rizzio, created great scandal and a matrimonial estrangement. After many and great misfortunes she was beheaded upon the charge of conspiring against the life of Elizabeth, 10, 441.

5. MARY OF BURGUNDY.—(1457-1482.) Daughter of Charles the Bold, wife of the German emperor Maximilian.

6. MARY OF EGYPT, Saint.—An African anchoress about whom many legends have clustered. She repented of the infamy of her early life, betook herself to the desert, and is said to have wrought many miracles. St. Jerome says that she lived in Alexandria in the year 365.

7. MARY OF FRANCE.—(1496-1533.) Daughter of Henry VII. of England, wife of Louis XII. of France, and later of the duke of Suffolk. Her daughter was mother of Lady Jane Grey.

8. MARY OF GUISE, or OF LORRAINE.—(1515-1560.) Queen of James V. of Scotland, mother of Mary Queen of Scots, and regent of Scotland.

9. MARY OF MODENA.—(1658-1718.) Queen of James II. of England, who was driven out by William of Orange.

10. MARY MAGDALENE, or MAGDALEN, or MAGDALA.—A woman mentioned in the gospels, out of whom Jesus cast seven devils, and who was thereafter a devoted follower of him. She is a favorite subject in art.

Mary de' Medici, 10, 410.

Mary and William, of England, 10, 444.

Mary buds of Shakespeare, 5, 23.

Maryland.—One of the thirteen original states in the U. S. of America, usually classified as one of the Southern States. Bounded on the north by Pa., east by Del. and the Atlantic Ocean, south by Chesapeake Bay, Va., and W. Va., and by the two latter on the west;

named in honor of the wife of Charles I. of England. In the early days, Md. was a proprietary colony, under a grant issued to Lord Baltimore in 1632; later it became a royal province. It took an active part in the Revolutionary War, and ratified the Federal Constitution in 1788. The state suffered much from the incursions of the British during the War of 1812-14. It was one of the slave states, but remained loyal to the Union during the Civil War, although a large number of its citizens volunteered in the Confederate service. In Sept., 1862, Gen. Lee, with a Confederate army of sixty thousand men, crossed the Potomac into Md. and the great battles of South Mountain and Antietam resulted, after which Lee returned to Va. The western part is mountainous and yields much coal and iron; the eastern part is generally level and produces wheat, corn, and tobacco; it has many quarries of marble, granite and slate; Chesapeake Bay and the Potomac River furnish excellent facilities for commerce; it is celebrated for its production of oysters. Annapolis is the capital and Baltimore its chief city; other towns of importance are Cumberland, Frederick, and Hagerstown. It has 23 counties; area, 12,210 sq. miles; pop. (1900), 1,190,050.

Maryland in Liberia.—A negro colony to the eastward of Cape Palmas, in what is now the Republic of Liberia, Africa, founded by the Maryland State Colonization Society in 1834. John Russworm, a citizen of Monrovia, was chosen the first governor in 1836. In 1837 it became part of Liberia.

"Maryland! My Maryland!"—A popular song of the Confederates in 1861-65, written by J. R. Randall in 1861. It was sung to the college tune of "Lauriger Horatius."

Maryland yellow-throat, 4, 185.

Marysville.—The capital of Yuba Co., Cal., at the junction of the Yuba and Feather rivers. It is a fruit center with flourishing trade. Pop. (1900), 3,497.

Masaba Heights.—A range of hills in northeastern Minn., famous for their iron ores.

Masaccio, 9, 210.

Masham, Lady (ABIGAIL HILL).—One of Queen Anne's intimate friends, daughter of Francis Hill of London. She entered the service of Lady Rivers, afterward that of the Duchess of Marlborough at St. Albans, and later became lady of the bedchamber to Queen Anne in whose favor she at length supplanted the duchess. In 1707 she married Samuel Masham, and in 1711 was given charge of the privy purse of the queen, 10, 445.

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Maskim, 10, 52.

Mason, Francis.—Born at York, England, 1799; died at Rangoon, British Burma, 1874. An American Baptist missionary to the Karens in Burma. He published "Burmah, Its People and Natural Productions."

Mason, George, 11, 117.

Mason, James Murray, 11, 391.

Mason, Jeremiah.—Born at Lebanon, Conn., 1768; died at Boston, 1848. A lawyer and politician; U. S. senator from N. H. (1813-17):

Mason, John, 11, 59, 60.

Mason, John Young, 11, 391.

Mason, Lowell.—Born at Medfield, Mass., 1792; died at Orange, N. J., 1872. A musical composer, noted as a teacher. He published many collections of church and Sunday-school music.

Mason, William.—Born at Boston, Mass., 1829. A musician and composer. He was a pupil of Moscheles, Liszt, and Dreyschock; has published a pianoforte method and many studies.

Mason, Dr. William, quoted on "Piano Technique," 9, 191.

Mason and Dixon's line, 11, 48.

Massachusettsiis, 11, 117.

Massachusetts.—One of the New England States and one of the thirteen original states of the American Union. Bounded on the north by Vt. and N. H., east by the Atlantic Ocean, south by the Atlantic Ocean, R. I., and Conn., west by N. Y. It was visited by explorers in the early part of the 17th century and was settled by the Pilgrims, who landed on Plymouth Rock in 1620; other settlements were made by the Puritans at Salem in 1628 and at Boston in 1630. The Salem witchcraft delusion was at its height in 1692, when many trials took place. The colony took an important part in the resistance to British oppression, and the first blood of the Revolution was shed within its boundaries, at Lexington and Concord, April 19, 1775, and at Bunker Hill, June 17, in the same year; it ratified the Federal Constitution in 1788. The surface is generally hilly except in the southeast, where it is low and flat; commerce, manufactures, and fisheries are the leading occupations, in all of which it is a leading state; it ranks first in the manufacture of boots and shoes and of cotton and woolen goods. The capital and chief city is Boston; it has a large number of populous manufacturing towns, the principal of which are Worcester, Fall River, Lowell, Cambridge, Lynn, New Bedford,

Somerville, Lawrence, Springfield, Holyoke, Salem, Brockton, Chelsea, Haverhill, Malden, and Gloucester. Area, 8,315 sq. miles; pop. (1900), 2,805,346; called the Old Bay State.

"Massachusetts," The.—A battleship of the U. S. navy, that participated in the battle of Santiago, July 3, 1898.

Massachusetts Indians.—A tribe of the Algonquin stock, formerly inhabiting the eastern portion of the present state of Mass. and the basin of the Neponset and Charles rivers. In 1617 they were much reduced by pestilence. In 1650 they were gathered into the villages of the Praying Indians and lost their tribal identity. They were always friendly to the whites.

Massacre of St. Bartholomew, 10, 295.

Massage, 1, 335.

for the baby, 2, 35.

Massasoit.—Born about 1580; died, 1661. A chief of the Wampanoag Indians, in southeastern Mass., and R. I., and an ally of the Plymouth colonists (1621-61).

Masséna, 14, 7.

Massey, Gerald.—Born, 1828. An English poet.

Massillon.—A city in Stark Co., northern Ohio, on the Tuscarawas River. It has coal-mines and sandstone quarries. Pop. (1900), 11,944.

Massillon, Jean Baptiste.—(1663-1742.) The great French pulpit orator of whom Louis XIV. said: "Other preachers teach me to think a great deal of them, this man makes me think little of myself."

Massinger, Philip.—(1584-1640.) An English dramatist, noted as the writer of "A New Way to Pay Old Debts." He died in poverty and obscurity.

Massys, Quentin, 9, 290.

Master and Pupil, Danish fairy tale, 3, 142.

Mastication, 1, 276.

Mastiff, 4, 22.

Mastodon, 5, 466.

Mastoid process, 1, 272.

Matagorda Bay.—An inlet of the Gulf of Mexico, south of Texas, at the mouth of the Colorado River. (2) Matagorda Island.—An island near the coast of Texas, southwest of Matagorda Bay.

Matanzas.—A port on the northern coast of Cuba, near Havana. The first encounter of the Spanish-American War took place here, Apr. 27, 1898, when a detachment of the blockading squadron shelled the harbor ports and demolished several works in process of construction, 12, 333.

Matariki, New Zealand fairy tale, 3, 38.

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- Matches**, Machinery for making, 5, 195.
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 Vestas, 5, 195.
 Wax, 5, 195.
- Maternal Affection**, 2, 389.
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 Weak yielding to, 2, 391.
- Maternity**, Responsibilities of, 2, 391.
- Mather, Cotton**, 11, 60.
- Mather, Increase**, 11, 60.
- Mather, Richard**, 11, 61.
- Mathew, Theobald**.—(1790-1856.) An Irish priest of the Roman Catholic Church, known as "Father Mathew," conducted a vigorous crusade in the cause of temperance and social and moral reform.
- Mathews, Charles**.—(1776-1835.) A prominent English actor of comedy and mimicry. His son CHARLES (1803-1878), attained considerable distinction in the same career.
- Matilda**.—(1) Queen of William the Conqueror and daughter of Baldwin V. Died in Normandy Nov. 3, 1083. (2) Matilda, or Maud, first wife of Henry I. of England, daughter of Malcolm III. of Scotland (1080-1118). (3) Matilda, queen of Stephen, king of England (1103-1152). (4) Matilda Maud, daughter of Henry I., of England and his first wife Matilda. (5) Matilda, countess of Tuscany, ruler of a large part of northern Italy (1046-1115). (6) Matilda, duchess of Saxony, third child of the eldest daughter of Henry II., of England and Eleanor of Aquitaine (1046-1189).
- Mat-making** for children, 2, 417.
- Matsya**, or Fish Avatar of Vishnu, 10, 9.
- Matterhorn**.—A mountain peak in the Alps in southern Switzerland. It is 14,836 feet high.
- Matthews, H. R.**, 14, 355.
- Matthews, Stanley**.—Born at Cincinnati, O., 1824; died at Washington, D. C., 1889. A lawyer and jurist of note. At the outbreak of the Civil War he entered the Union army as colonel of the 51st Ohio volunteers. In 1881 he was appointed a justice of the Supreme Court of the U. S. in which position he served until his death.
- Maturity**.—Time fixed for payment.
- Mauch Chunk**.—The capital of Carbon Co., Pa., on the Lehigh River. There are important anthracite-coal mines. Pop. (1900), 4,029.
- Mauna Loa**.—The volcano of the Sandwich Islands in the island of Hawaii. It is 13,758 feet above sea-level. It was in a state of activity in 1880 and 1887.
- Maunday Thursday**, 13, 101.
- Maupassant de Henri**.—(1850-1893.) A French novelist.
- Maurepas Lake**.—A lake in eastern La., west of Lake Pontchartrain, with which it communicates.
- Maurice, or Marshal Saxe**.—(1696-1750.) A soldier who fought on behalf of the French and conquered the whole of Belgium.
- Maurice of Nassau**, 10, 299.
- Maurice of Saxony**.—(1521-1553.) "Founder of German Protestantism."
- Mauritius**.—A British island in the Indian Ocean, east of Madagascar. It has an area of about 1,000 sq. miles and a population of about 400,000. It was taken from the French in 1810. It is the scene of St. Pierre's story of "Paul and Virginia."
 acquired by the English, 10, 360.
- Maury, Matthew Fontaine**.—(1806-1873.) The author and compiler of charts and tables of astronomy and hydrography.
- Mausolus, Tomb of**, 9, 361.
- Mauve**, 9, 329.
- Maxillan Bones**, 1, 273.
- Maxim, Sir Hiram S.**—Born, 1831; began life as apprentice to coach-builder; worked in various machine-shops, and began patenting his ideas; invented Maxim gun in which recoil of gun serves as power for reloading; has done much in electricity, and has for some time striven to solve the problem of aerial navigation; director of Vickers, Sons, and Maxim.
- Maxim, Hudson**, on "Invention," 5, 372.
- Maximilian**, 12, 333.
- Maximinus**, 10, 231.
- Max O'Rell**.—The pen-name of Paul Blouet. A French writer and humorist.
- May, Sir Thomas Erskine**.—(1815-1886.) An eminent English parliamentary authority upon Rules and Procedure. He was made Baron Farnborough in the year of his death.
- Maya**, 10, 32.
- Mayer, Brantz**.—Born at Baltimore, 1809; died there, 1879. A lawyer and author. He edited the "Baltimore-American"; was secretary of the U. S. legation in Mexico (1841-42); commissioned colonel in the Federal army. Among his writings are several works on "Mexico," and "Captain Canot," a novel.
- "Mayflower"**.—(1) A ship of about 180 tons burden, in which the English Pilgrims sailed from Southampton to Plymouth, Mass., in 1620. (2) A wooden center-board sloop yacht, designed by Edward Burgess, launched May 6, 1886. The dimensions are: length over all, 100 ft.; length, load water-line, 85.7; beam, 23.6; beam, load water-line, 22.3; draught, 10 ft.;

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- displacement, 128 tons. She defended the America's cup against the "Galatea" Sept. 7 and 9, 1886, winning both races.
- May-fly, 4, 360.**
 Characteristics of, 4, 360.
 Habits of the, 4, 360.
- Mayhew, Experience.**—Born in Martha's Vineyard, Mass., 1673; died there, 1758. A missionary to the Indians in Martha's Vineyard.
- Mayhew, Jonathan.**—Born in Martha's Vineyard, Mass., 1720; died at Boston, 1766. A clergyman, controversialist, and advocate of liberalism; son of Experience Mayhew. His writings were edited by A. Bradford (1838).
- Mayors of the Palace, 10, 255.**
- Maysville.**—The capital of Mason Co., Ky., on the Ohio River. It has an important hemp trade. Pop. (1900), 6,423.
- Mazarin, Jules.**—(1602–1661.) Chief minister of France during the minority of Louis XIV., and cardinal. A great favorite of Richelieu, 10, 315.
- Mazeppa, Ivan.**—(1645–1710.) A page in the household of Casimir of Poland, who for an intrigue was bound naked upon an untamed horse which carried him to Ukraine, where he was rescued by Cossacks. He became a favorite of Peter the Great, who made him a Prince of Ukraine. He made an attempt to overthrow Russia. He died by poison at his own hand. Lord Byron made him the subject of a poem.
- Mazzei Letter, 11, 248.**
- Mazzini, Guiseppe,** Life of, 10, 470.
- McArthur, Duncan, 11, 248.**
- McCall, George Archibald, 12, 73.**
- McCarthy, Justin.** Roxburgh Rd., Westgate-on-Sea, England (1821–1905). Former editor of "Morning Star," then leader writer "Daily News"; equally known as historian of our own times, novelist, and politician; from 1890–95 chairman of Irish Nationalists; for 21 years M. P.
- McClellan, George Brinton,** Sketch of, 12, 77. referred to, 14, 102.
- McClernand, John Alexander, 12, 83.**
- McClintock, Sir Francis Leopold.**—Born in Ireland in 1819. A British admiral, famous as an Arctic explorer.
- McClintock, John.**—Born at Philadelphia, 1814; died at Madison, N. J., 1870. A clergyman and theologian of the Methodist Episcopal Church, president of Drew Theological Seminary, Madison, N. J. (1867–70). He was chief editor of McClintock and Strong's "Cyclopædia of Biblical, Theological, and Ecclesiastical Literature."
- McCloskey, Cardinal John, 12, 321.**
- McCluskey, George W.,** on "The Policeman," 13, 433.
- McCook, Alexander McDowell, 12, 83.**
- McCook, Daniel, 12, 83.**
- McCook, Edward M., 12, 83.**
- McCook, Robert L., 12, 83.**
- McCormick, Robert, 5, 287.**
- McCormick, Robert S., 12, 182.**
- McCosh, James.**—Born at Carskeoch, Ayrshire, 1811; died at Princeton, N. J., 1894. A Scottish-American philosopher and educator. He was professor at Belfast, Ireland (1851–68); president of Princeton College, N. J. (1868–88). His works include "Method of Divine Government," "Examination of Mill's Philosophy," "Laws of Discursive Thought," "The Scottish Philosophy," and "Religious Aspects of Evolution."
- McCrea, Jane.**—Born in N. J., 1754; killed near Fort Edward, N. Y., 1777, by the Indian allies of Burgoyne.
- McCulloch, Ben, 12, 83.**
- McCulloch, Hugh, 12, 321.**
- McCulloch, Mrs. Catherine Waugh,** on "If I Were a Girl Again," 1, 260.
- "McCulloch," The, 12, 321.**
- McDonald, Annie, 14, 375.**
- McDonald, George,** "The Golden Key," 2, 311.
- McDonough, Thomas, 11, 248.**
- McDougall, Alexander.**—Born on the island of Glay, Scotland, 1731; died at New York, 1786. A Revolutionary general. He was defeated at White Plains, 1776; was promoted to maj.-gen. in 1777; was chosen a delegate to the Continental Congress in 1780 and 1784.
- McDowell, Edward A.**—An American composer; born, 1861. The author of "Hamlet," "Ophelia," "Launcelot," and others.
- McDowell, Irvin, 12, 84.**
- McDuffie, George.**—Born in Columbia (now Warren) Co., Ga., 1788; died in Sumter district, S. C., 1851. A statesman and orator, a prominent supporter of nullification. He was a member of Congress from S. C. (1821–34); governor of S. C. (1834–36), and U. S. senator (1843–46).
- McEntee, Jervis.**—Born at Rondout, N. Y., 1828; died there, 1891. A painter of landscapes and figures. He is especially noted for his autumn and winter scenes. He was elected a member of the National Academy in 1861, 9, 331.
- McGee, Thomas D'Arcy.**—(1825–1868.) An Irish journalist in Great Britain, U. S., and Canada. He was shot as he was leaving the House of Commons, Ottawa, by Patrick Whelan.

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- McGillivray, Alexander.**—Born in Ala., about 1740; died at Pensacola, Fla., 1793. A chief of the Creek Indians.
- McGlynn, Rev. Edward,** 12, 321.
- McHugh, Judge W.,** 13, 259.
- McIlvaine, Charles Pettit.**—Born at Burlington, N. J., 1799; died at Florence, Italy, 1843. A bishop and theologian of the Protestant Episcopal Church. He was bishop of Ohio (1832-73). His best-known work is "Evidences of Christianity."
- McIntosh, Miss Jennie,** an inventor, 7, 376.
- McKay, Archie,** 14, 114.
- McKean, Thomas.**—Born at New London, Pa. 1734; died at Philadelphia, 1817. A politician and jurist. He was a member of Congress from Del. (1774-83); signed the Declaration of Independence in 1776; was chief-justice of Pa. (1777-99), and governor of Pa. (1799-1808).
- McKeesport.**—A borough in Allegheny Co., Pa. on the Monongahela. Pop. (1900), 34,277.
- McKenna, Joseph,** 12, 321.
- McKinley, William,** 12, 322.
 Assassination of, 12, 173.
 First administration of, 12, 170.
 on the value of a liberal education, 8, 142.
 Second term of, 12, 173.
- McLane, Louis.**—Born at Smyrna, Del., 1786; died at Baltimore, 1857. A politician. He was U. S. senator from Del. (1827-29); U. S. minister to Great Britain (1829-31); secretary of the treasury (1831-33); and secretary of state (1833-34).
- McLane, Robert Milligan.**—Born at Wilmington, Del., 1815; died at Paris, 1898. A diplomatist, son of Louis McLane. He was member of Congress from Md. (1847-51); U. S. minister to China (1853-55), to Mexico (1859-60), and to France (1885-88).
- McLaws, Lafayette,** 12, 84.
- McLean, John,** 11, 391.
- McLeod, Alexander.**—Born in Mull, Scotland, 1774; died at New York, 1833. A clergyman of the Reformed Presbyterian Church and a religious writer. He was pastor of the First Reformed Presbyterian Church of N. Y. (1801-33).
- McLeod, Xavier Donald.**—Born at New York, 1821; killed near Cincinnati, 1865. A poet and miscellaneous writer, son of Alexander McLeod.
- McLeod Case,** 11, 391.
- McNeil, John,** 11, 248.
- McPherson, James Birdseye,** 12, 84.
- Mead, Elizabeth Storrs,** 1, 268.
- Mead, Larkin Goldsmith.**—Born at Chesterfield, N. H., 1835. A well-known sculptor. He went to Florence in 1862, where he resides. Among his works are a colossal statue of "Vermont"; "Ethan Allen," at Montpelier, Vt.; "Lincoln," at Springfield, Ill., and "Ethan Allen," at Washington.
- Meade, George Gordon,** Sketch of 12, 85.
- Meade, Richard Kidder.**—Born in Nausemond Co., Va., 1746; died in Frederick Co., Va., 1805. A Revolutionary officer.
- Meadow lark,** 4, 174.
 Eggs of the, 4, 117.
 Nest of the, 4, 117.
- Meadow-sweet,** 5, 23.
- Meanness, Treatment of,** 2, 269.
 the most difficult fault to correct, 2, 270.
- Measles, After effects of,** 2, 373.
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- Measure, Angular,** 13, 148.
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 Surveyors' linear, 13, 147.
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- Measurement, Unit of celestial,** 5, 121.
- Measures, 13, 146.**
 Common, 13, 150.
 Metric system of, 13, 152.
- Meats, Best,** 1, 110.
 To select, 1, 109.
- Meatus auditorium externus,** 1, 272.
- Mecca.**—The sacred city of the Mohammedans; capital of Arabia; the birthplace of Mohammed.
- Mechanical drawing,** 7, 259.
 engineering, 13, 441.
- Mechanicsville (Va.), Battle of,** 12, 91.
- Mecklenburg Declaration,** 11, 118.
- "Medea."**—A tragedy by Euripides written about 431 B. C.
- Medea, the sorceress,** 10, 109.

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Medes and Persians, 10, 186.

Medford.—A city in Middlesex Co., Mass., on the Mystic River; the seat of Tufts College (Universalist). Pop. (1900), 18,244.

Medici.—An Italian family for a long period in power over Florence and Tuscany. It produced many eminent statesmen, and its members were patrons of the fine arts. The last representative in power was Giovan Gastone de Medici, who died in 1737, 10, 278.

Tombs of the, 9, 378.

Medicine Bow Mountains.—A chain of the Rocky Mountains in northern Col. and southern Wyo.

Medicine Chest, 1, 363.

Contents of, 1, 368.

To make a, 1, 363.

Medicine, Rules for handling, 1, 364.

Mediterranean Sea.—A large midland sea, bordered by the continents of Europe, Asia, and Africa, and connected with the Atlantic Ocean by the Strait of Gibraltar. Its shores have been the scenes of many civilizations, particularly those of Egypt, Greece, and Rome.

Medulla oblongata, 1, 272, 283.

Medusa.—One of the Gorgons of Greek mythology. Her hair had been changed to serpents, and everyone who looked on her was turned into stone. She was beheaded by Perseus, who attacked her with averted face, guiding his movements by the reflection in his polished shield. She has been a favorite subject with sculptors, 10, 110.

Medusa, a jelly fish, 4, 379.

Medusa's head, 5, 137.

Meek, Fielding Bradford.—Born in Iowa, 1817; died at Washington, D. C., 1876. A geologist and paleontologist.

Megarhinus, 4, 357.

Megatherium, 5, 467.

Mehemet Ali, 10, 362.

Meiger quoted on mosquitoes, 4, 357.

Meiggs, Henry.—Born in Catskill, N. Y., 1811; died in Lima, Peru, 1877. He was a lumber merchant in San Francisco, but failed in 1854, and went to South America. He engaged in railway construction in Chile, and after 1867 in Peru. His greatest public work there was the Oroya railroad over the Andes.

Meigs, Fort, 11, 249.

Meigs, Montgomery Cunningham, 12, 91.

Meigs, Return Jonathan.—Born at Middletown, Conn., 1765; died at Marietta, Ohio 1825. A politician and jurist, son of R. J. Meigs.

Meigs, Return Jonathan, 11, 118.

Meissonier, Jean Louis Ernest, 9, 468.

Melbourne.—The largest city of Australia, capital of Victoria, and one of the chief seaports of the Southern Hemisphere. Exports principally gold, wool, and hides. Pop., (1904) 508,450.

Meleager, 10, 112.

Melenite.—An explosive discovered in 1886-87; it has a destructive power 100 times greater than that of the ordinary gunpowder, and ten times that of nitroglycerine.

Mello, Custodio José de.—A naval officer of Brazil, born in 1845. He headed a movement for revolution which was not successful.

Melon, 5, 73.

Melos, or **Milo**.—A volcanic island of the Cyclades, Greece; the statue of "Venus of Melos" was found here in the ruins of the city of Melos.

Melpomene, 10, 92.

Melville, Herman.—Born at New York, 1819; died there, 1891. A novelist. From 1857 to 1860 he lectured in the U. S. and traveled in England and on the Continent. He was a district officer in the N. Y. customhouse (1866-85). His works include "Typee," "Omoo," "Moby Dick, or the White Whale," and "Pierre, or the Ambiguities."

Memling, Hans, 9, 290.

Memory, Cultivation of the, 8, 439.

to observation, Relation of, 2, 164.

Memphis.—The ancient capital of Egypt, supposedly built by Menes.

Memphis.—The capital of Shelby Co., Tenn., on the Mississippi River. It has lumber manufactures; is one of the chief cotton markets of the U. S., and has important river commerce. The Mississippi is crossed here by the only bridge that spans it below St. Louis. Pop. (1900), 102,320.

Memphis (Tenn.), Capture of, 12, 91.

Memphremagog Lake.—A lake on the border of Vt., and the province of Quebec, Can. It discharges into the St. Lawrence by the rivers Magog and St. Francis.

Memrumus, 10, 81.

Mencius, 10, 150.

Mendelief's law, 5, 185.

Mendelssohn, Bartholdy, Felix, 9, 115.

Songs without words, 9, 121.

Mendelssohn, Moses, 9, 115.

Mendenhall, Thomas Corwin.—Born near Hanoverton, Ohio, 1841. A physicist. He was professor of Physics and Mechanics in Ohio University (1873-78), when he became professor of Physics in the Imperial University at Tokio, Japan. He returned to the U. S. in 1881, and resumed his chair in Ohio University, held a professorship in the U. S. signal service

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- (1884-86), when he became president of the Rose Polytechnic Institute, Terre Haute, Ind. He was superintendent of the U. S. coast survey (1889-94), and then became president of the Worcester Polytechnic Institute.
- Mend One's Fences**, 12, 333.
- Menelaus**, King of Sparta, 3, 367.
- Menes**, 10, 179.
- Menhaden**, 4, 292.
 Characteristics of, 4, 292.
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 Food of the, 4, 292.
 Oil of the, 4, 292.
 used as bait, 4, 292.
 Young, 4, 293.
- Mennonites**.—A Christian denomination founded in the 16th century at Friesland, by Menno Simons. Their leading tenets are: baptism on profession of faith, refusal of oaths, of civic offices, the support of the state in acts of war, and a leaning to asceticism.
- Menominee Indians**.—A tribe of the Algonquin family, which, since it became known to the whites, has occupied lands in Wis. and upper Mich., chiefly along the Menominee River and the west side of Green Bay, extending south to the Fox River, and west to the Mississippi. The name means "wild rice men," from their principal article of food. They now number about 1,300 at the Green Bay (Wis.) Agency. In the early Indian wars, they sided with the British.
- Menon, General**, 14, 119.
- Mensuration, Rules of**, 13, 151.
- Mental development**, 2, 96.
 Nervous system, 2, 96.
 Relation of growth to, 2, 91.
- Mentha aquatica**, 5, 67.
 arvensis, 5, 67.
 canadensis, 5, 67.
 piperita, 5, 67.
 pulgerium, 5, 68.
 sylvestris, 5, 67.
- Mentor**, the counsellor, 3, 383.
- Menu terms translated**, 13, 323.
- Menzel**, 9, 328.
- Mercer, Charles Fenton**.—Born at Fredericksburg, Va., 1778; died near Alexandria, Va., 1858. A politician, Federalist, and Whig member of Congress from Va. (1817-39).
- Merchant Marine**, 12, 333.
- Merchant of Venice**, Study of the, 8, 534.
- Mercie, Antonin**, 9, 402.
- Mercuric compounds**, 5, 212.
- Mercurous compounds**, 5, 212.
- Mercury**, the god, 10, 97.
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- Mercury**, the metal, 5, 210.
 Amalgam, 5, 210.
 Properties of, 5, 211.
 Sources of, 5, 211.
 Uses, 5, 211.
 Valences of, 5, 212.
- Meredith, George**.—Flint Cottage, Boxhill, Surrey, England (1828-), the most cryptic, brilliant, and epigrammatic of modern novelists; venerated by all littérateurs; President Society of Authors; published first book of poems 50 years ago, and his most famous novel, "The Ordeal of Richard Feverel," in 1859.
- Merger**, 13, 166.
- Meriden**.—A city in New Haven Co., Conn.; the seat of flourishing manufactures; noted for Britannia-metal ware. Pop. (1900), 24,296.
- Meridian**.—The capital of Lauderdale Co., Miss. Pop. (1900), 14,050.
- Meridian defined**, 5, 109.
- Meridug**, 10, 54.
- Mérimée, Prosper**.—(1803-1870.) A prominent French man of letters.
- Merino wool**, 4, 24.
- Merit in an office-holder**, 12, 425.
- Merlin**.—(1) A Saxon bard of the 6th century (2) An enchanter in the legends of the romance of Arthur, a friend and counsellor of the king, prominent in Tennyson's "Idylls of the King," 3, 434.
- Merodach**, 10, 62, 182.
- Merovingians**.—A once vigorous dynasty that ruled Germany from the time of Clovis to that of Charlemagne. With the death of Dagobert (638 A. D.) the kings became mere shadows of power beside their high officers of State. These were called Mayors of the Palace. Charles Martel and the Pepins of Herstal, about the close of the Merovingian line, filled this ancestral office, and were the real rulers of the country. Their descendants afterward succeeded to the throne of Germany, 10, 235.
- Merriam, General H. C.**, on "Early Marriage," 1, 237.
- "Merrimac," The**, 12, 91.
- Merrimac River**.—A river in N. H. and north-eastern Mass. It furnishes water-power to Manchester, Nashua, Lowell, Lawrence, etc.
- Merriman, Henry Seton**.—The pseudonym of Hugh S. Scott.
- Merritt, Wesley**, 12, 334.
- Merryman Case**, 12, 91.
- Meshach**, 10, 184.

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- Mesmer, Friedrich Anton.**—(1733-1815.) A German physician who originated the theory of animal magnetism, or mesmerism.
- Mesohippus**, 5, 466.
- Mesopotamia.**—The fertile alluvial plain lying between the rivers Tigris and Euphrates. It has successively been the seat of the Assyrian, the Chaldean, and the Babylonian empires, and has frequently been conquered and reconquered by the great ancient monarchies. At present it is a Turkish province having its capital at Bagdad.
- Mesozoic era**, 5, 464.
- Message, Presidential**, 12, 334.
Veto, 12, 334.
- Messalina**, wife of Claudius, 10, 397.
- Messenger.**—A gray, thoroughbred horse, by Mambrino, imported into the U. S. from England about 1788. All the main lines of trotting-horses except the Morgans and the Clays are derived from him.
- Messiah**, Oratorio of, 9, 110.
- Messidor**, 13, 97.
- Metacarpal bones**, 1, 274.
- Metal defined**, 5, 432.
Demonetization of, 13, 161
- Metals**, 5, 432.
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Copper ores, 5, 438.
Density of, 5, 433.
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Fusibility of, 5, 434.
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Iron ores, 5, 436.
Lead ores, 5, 439.
Luster, 5, 432.
Malleability of, 5, 434.
Metallic ring of, 5, 433.
Silver, 5, 438.
Sonority of, 5, 433.
Tenacity of, 5, 434.
Tin ores, 5, 439.
- Metamorphic rocks**, 5, 432.
- Metaphosphoric acid**, 5, 197.
- Metastasio**, 9, 112.
- Metatarsal bones**, 1, 274.
- Metcalf, Miss Betsey**, 8, 208.
- Metcalf, Victor H.**, 12, 181.
- Meteors**, 5, 133.
Showers of, 5, 133.
- Meter**, 13, 152.
- Meter of poetry**, 8, 406.
- Methane**, or **Marsh-gas**, 5, 228.
- Method as a success winner**, 14, 184.
- Methuen, Baron**, Corsham Court, Wilts, England (1845-).—Began his military career in the Scots Guards, and saw active service in W. and S. Africa; he was second in command (under Sir Redvers Buller) in the beginning of the S. African War of 1900, sustaining the severe defeat at Magersfontein, after several dearly bought victories. He was defeated, wounded and taken prisoner by the Boers under Gen. Delarey in March, 1902. He was set at liberty, after a few days' imprisonment, by the clemency of his captors.
- Methyl alcohol**, 5, 230.
- Metric system of weights and measures**, 13, 152.
Countries which use the, 13, 215.
Cubic measure, 13, 217.
explained, 13, 216.
liquid measures, 13, 218.
measures of capacity, 13, 217.
length, 13, 216.
surface, 13, 217.
surface measures, 13, 218.
system taught by coins, 13, 160.
weights, 13, 218.
- Metropolitan Museum**, Art student at the, 9, 334.
- Metternich, Prince**, 10, 366.
- Metz.**—The capital of Lorraine (or Lothringen), situated on the river Moselle. It is one of the strongest fortresses in Europe and has sustained some famous sieges, the most important being in the Franco-German War when Bazaine surrendered 173,000 men to Prince Frederick Charles, Oct. 7, 1870.
- Meuse.**—A department of northeastern France, traversed by the river Meuse. Its chief industries are manufactures and the raising of live stock.
- Mexican coat of arms**, 1, 200.
- Mexico.**—A North American Republic, bounded on the north by the U. S., east by the Gulf of Mexico and the Caribbean Sea, south by British Honduras, Guatemala, and the Pacific Ocean, and by the latter also on the west. It has 27 states, one federal district, and two territories. Mining, agriculture, and cattle-raising are extensively carried on. The government is modeled after that of the U. S. The language is Spanish and the religion is Roman Catholic. The people are chiefly Creoles, Indians, and mixed races. Area, 75,664 sq. miles; pop., (1900) 13,605,919.
- Mexico, War with**, 11, 312, 392.
- Mexico (City of), Surrender of.**—After a series of brilliant operations, the U. S. forces overcame three times their number and were in possession of the capital city of Mexico.

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Before daylight of Sept. 14, 1847, the city council had waited upon Gen. Scott, the American commander, and demanded terms of surrender. He replied that the city had come into his power the night before and that the terms accorded would be imposed by the American army. At 7 o'clock the U. S. flag was hoisted on the National Palace, and at 9 o'clock Gen. Scott rode into the Plaza, escorted by the Second U. S. Dragoons. Soon after taking possession of the city, fire was opened upon the American soldiers from the roofs of houses, windows, and street corners, by about 2,000 convicts who had been liberated the night before by the fleeing government. These were joined by as many soldiers who had disbanded themselves and assumed the part of citizens. This firing was kept up in a desultory way for 24 hours and many soldiers were killed or wounded.

Meyer, George V. L., 12, 182.

Meyer, Lothar, 5, 185.

Meyerbeer, Giacomo, 9, 122.

Miami Indians.—A tribe of North American Indians first known in 1675 in southern Wis. About 1690 they settled on the St. Joseph River in southern Mich. and were considered afterward in treaty negotiations as owners of the entire Wabash country and western Ohio. They now number less than four hundred.

Miami River.—A river in Ohio; length over 150 miles.

Miantonomoh.—Died, 1643. A sachem of the Narraganset Indians, nephew of Canonicus. In 1637 he aided the colonists of Conn. and Mass. in defeating the Pequots. He became involved in a war with Uncas, sachem of the Mohegans, was defeated, captured and put to death with the approval of the English, who claimed jurisdiction over both tribes.

Mica, 5, 445.

Michael Feodorovitch of Russia, 10, 328.

Michaelmas Day, 13, 101.

Michelangelo, 9, 228, 343, 377; 14, 227.

Michelet (*mēsh-lā'*), **Jules.**—(1798–1874.) A noted French historian. His greatest work was the "History of France."

Michigan.—A north central state of the United States. It consists of two peninsulas, very irregular in form, separated by the Strait of Mackinac; both are nearly surrounded by water; the southern peninsula lies between Lake Michigan on the west, the Strait of Mackinac on the north, and Lakes Huron, St. Clair, and Erie and the St. Clair and Detroit rivers on the east; on the south it is bounded by Ohio and Ind.; the northern or upper peninsula, much smaller in area, lies between

Lake Superior, St. Mary's River, and the Strait of Mackinac, bounded by Wis. on the south and west. The territory was explored by the French in the 17th century; the first permanent settlement was at Sault Ste. Marie in 1668; it was ceded to Great Britain in 1763 and to the U. S. in 1796; it formed part of the Northwest Territory and was organized as a separate territory in 1805; Detroit was taken by the British in 1812, but was retaken by the Americans in 1813; Michigan was admitted into the Union in 1837. The upper peninsula is mountainous and produces enormous quantities of iron, copper, and other minerals; salt and lumber are also among its chief products; the lower peninsula is level and fertile and yields especially grain and fruit; it has large fishery interests. It has 85 counties; Lansing is the capital and Detroit the chief city; other principal towns are Grand Rapids, Saginaw, Bay City, Jackson, Kalamazoo, Port Huron, Muskegon, and Battle Creek. Area, 58,915 sq. miles; pop. (1900), 2,420,982; called the Wolverine State and the Lake State.

Michigan, Lake.—One of the five great lakes of the U. S., inclosed by Mich. on the north and east, Ind. on the south, and Ill. and Wis. on the west. Its chief bays are Green Bay and Grand Traverse Bay; its chief tributaries are the Fox, Manistee, Menominee, Muskegon, Kalamazoo, Grand, and St. Joseph rivers. Chicago and Milwaukee are the chief cities on its banks. It discharges by the Strait of Mackinac into Lake Huron. Length, about 340 miles. Greatest width, about 85 miles. Greatest depth, 870 feet. Mean height above sea-level, 582 feet. Area, over 22,000 sq. miles.

Michigan, University of.—A coeducational institution at Ann Arbor, Mich. It is under state control; was opened in 1841; contains collegiate, medical, and law departments, with an observatory, dental college, school of pharmacy, scientific museums, and library of 130,000 vols., 8, 47.

Michigan City.—A city in La Porte Co., Ind., on Lake Michigan. It has a lumber trade. Pop. (1900), 14,850.

Michilimackinac.—See MACKINAC.

Microcosmic Salt, 5, 208.

Microscope, 5, 300.

Midas.—A king of Phrygia who, according to the Greek legend, received from the god Dionysus the power of turning whatever he touched into gold, 10, 101.

and the asses' ears, 10, 104.

Middle-aged women and success, 1, 265.

Middle Ages.—The period between the ancient and modern history in Europe. By Hallam

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it was regarded as extending from about 500 to 1500 A. D.

History of the, **10**, 233.

Music in the, **9**, 182.

Middleborough.—A town in Plymouth Co., Mass. Pop. (1900), 6,885.

Middlebury.—The capital of Addison Co., Vt., on Otter Creek; the seat of Middlebury College (Congregational). Pop. (1900), 3,045.

Middle Creek (Ky.), Battle of, **12**, 92.

Middle Park.—A plateau in Grand Co., northern Col. Length from 60 to 70 miles.

Middle States.—A collective name for the States of N. Y., N. J., Pa., Del., and Md.

Middleton, Arthur, **11**, 118.

Middleton, Henry, **11**, 392.

Middleton, Thomas.—(About 1570-1627.) A famous English playwright and dramatist.

Middletown.—(1) A manufacturing city in Orange Co., N. Y. Pop. (1900), 14,522. (2) One of the capitals of Middlesex Co., Conn., on the Connecticut River. It is a port of entry, is the seat of Wesleyan University (M. E.), Berkeley Divinity School (Episcopal), a state insane asylum, and an industrial school for girls. Pop. (1900), 17,486.

Mid-Lent Sunday, **13**, 101.

Midnight Appointments, **11**, 249.

Midnight sun, **5**, 114.

Midsummer Day, **13**, 101.

Midsummer Nights' Dream, **9**, 121.

Mifflin, Thomas.—Born at Philadelphia, 1744; died at Lancaster, Pa., 1800. A Revolutionary general and politician, a member of the "Conway Cabal" in 1777. He was president of the executive council of Pa. (1788-90), and governor of Pa. (1790-99).

Mignard, Pierre, **9**, 263.

Mignet (*mên-yâ*), François Auguste Marie.—(1796-1884.) One of the most prominent French historians. Elected to the Academy in 1836.

Mignonette, Symbolism of, **1**, 199.

Miguel, Dom (MARIA EVARISTO MIGUEL).—(1802-1866.) Third son of John VI. of Portugal. Was expelled from the country for political reasons; afterward became regent and usurped the throne. Was dethroned and in 1834 capitulated.

Milan.—A city of northern Italy, capital of the province of Milan. It was the episcopal residence of Ambrose in the 4th century. It is famous for its elaborate cathedral, Leonardo da Vinci's fresco of "The Last Supper," and other works of art.

Milan Decree, **11**, 249.

Milanion, **10**, 112.

Milch cow, Points of a good, **4**, 16.

Mildew, **5**, 97.

Downy, **5**, 97.

Grape, **5**, 97.

Powdery, **5**, 97.

Mile, Common, **13**, 147.

Geographical, **13**, 147.

Nautical, **13**, 147.

Mileage, **12**, 335.

Miles, Nelson Appleton, **12**, 335.

on "The Soldier," **13**, 425.

Mile Springs (Ky.), Battle of, **12**, 93.

Miletus.—An ancient city on the southwestern coast of Asia Minor, early colonized by Ionian Greeks, and later a center of literature and philosophy. It contained a temple of Apollo, noted for its splendor.

Milfoil, **5**, 78.

Milford.—A town in Worcester Co., Mass. It has manufactures of boots. Pop. (1900), 11,376.

Military Academy, **12**, 335.

Tribunes, **10**, 212.

Militia, **12**, 335.

Naval, **12**, 342.

MILK, USEFUL INFORMATION ABOUT.—

Feed has a much greater influence on quantity of milk produced than upon its quality.

In well-regulated dairies each cow is milked during ten months of the year. Any milk having a large amount of sediment is suspicious; particles of dirt are a sign that germs are abundant; thus dirty milk may be dangerous as well as disgusting. Any milk having an unnatural appearance should be discarded.

Milk contains all the ingredients needed for nourishment. An ordinary glass of buttermilk contains as much nourishment as half a pint of oysters, or two ounces of bread, or a good-sized potato.

Observe and enforce the utmost cleanliness about the cattle, their attendants, the stable, the dairy, and all utensils.

A person suffering from any disease, or who has been exposed to a contagious disease, must remain away from the cows and the milk.

The milker should be clean in all respects; he should wash and dry his hands just before milking and should wear a clean outer garment, used only when milking, and kept in a clean place at other times. Brush the udder and surrounding parts just before milking, and wipe them with a clean, damp cloth or sponge. Milk quietly, quickly, cleanly, and thoroughly. Cows do not like

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Milk, Useful information about — *Continued.*

unnecessary delay. Commence milking at the same hour every morning and evening and milk the cows in the same order. Throw away the first few streams of each teat; this milk is very watery and of little value, but it may injure the rest. Milk with dry hands; never allow the milk to come in contact with the hands. Do not allow dogs, cats, loafers, to be around at milking time.

If any accident happens by which a pail full, or partly full, of milk becomes dirty, do not try to remedy this by straining, but reject all this milk and rinse the pail.

Weigh and record the milk given by each cow.

Remove the milk of every cow at once from the stable to a clean, dry room, where the air is pure and sweet. Do not allow cans to remain in stables, while they are being filled. Strain the milk through a metal gauze and a flannel cloth or layer of cotton as soon as it is drawn. Aerate and cool the milk as soon as strained.

Never close a can containing warm milk which has not been aerated. If the cover is left off the can, a piece of cloth or mosquito netting should be used to keep out insects.

If milk is stored, it should be held in tanks of fresh, cold water (renewed daily), in a clean, dry, cold room. Unless it is desired to remove cream, it should be stirred with a tin stirrer often enough to prevent the forming of a thick cream layer. Keep the night milk under shelter so rain cannot get into cans. In warm weather hold it in a tank of fresh cold water.

Never mix fresh warm milk with that which has been cooled.

Do not allow the milk to freeze.

Under no circumstances should anything be added to milk to prevent souring. Cleanliness and cold are the only preventives needed. All milk should be in good condition when delivered.

When cans are hauled far they should be full, and carried in a spring wagon. In hot weather cover the cans, when moved in a wagon, with a clean wet blanket or canvas.

Milk utensils for farm use should be made of metal and have all joints smoothly soldered. Never allow them to become rusty or rough inside. Clean all utensils by first thoroughly rinsing them in warm water; then clean inside and out with a brush and hot water in which a cleaning material is dissolved; then rinse and lastly sterilize by boiling water or steam. Use pure water only. After cleaning keep utensils

inverted, in pure air, and sun if possible, until wanted for use.

To make good butter one must have good milk, which comes only from healthy cows, fed on good sweet pasture, or on good, sweet grain and other forage. Leeks, wild onions, ragweed, and certain other obnoxious weeds, give to the milk, and the butter made from it, a decidedly bad flavor. Impure water has its effect also, both on the health of the animals and on the quality of the milk.

When good, clean milk has been secured, the next operation is to separate the cream from the body of the milk. Milk should be set as soon as possible after being drawn from the cow. With open setting it must be in a room where the air is pure; a pantry with a door opening in the kitchen is a bad place. Cream should be allowed to sour or ripen for a number of hours before churning; if allowed to stand in a warm place for twelve to twenty-four hours, it will ripen. Ripening of cream is simply a matter of bacteria growth. Whether it ripens in a proper or improper manner depends upon the number and kinds of bacteria that chance to be in it at the beginning of the ripening. Among the kinds of bacteria found in the cream, there are some in the cream which produce a pleasant, desirable aroma and flavor. By proper care in barns and dairies the mischievous species may be in general kept out of the cream. Cleanly methods in cow stall and dairy will cause the cream to contain a small quantity of bacteria and only wholesome ones.

The odor from cooking vegetables and meat will surely injure the butter.

Many make butter in a cellar because it is cool, but it is apt to impart a musty, moldy smell to the butter. A cellar may be cool and yet so ventilated as to have pure air; then it is suitable for butter making.

The time to skim is when the milk has soured just enough to be a little thick at the bottom of the pans and to thicken the cream. Cream cannot be skimmed off when it is thin and sweet without loss. No milk should be taken with the cream. Cream with milk in it sours much more rapidly than cream with no milk in it. Whenever a new skimming is put into a cream jar or can, the whole should be thoroughly stirred and mixed.

Setting the cans in cold air will not be as effective in raising the cream as setting them in cold water, even though the temperature of the surrounding air is near the freezing point.

When shallow setting has been used, the cream is already ripened or partially so when

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Milk, Useful information about — Continued.
 taken off. No fresh cream should be put in the can for twelve to sixteen hours before churning, for if this is done the fresh cream will not be ripened and the butter will not churn out fully. A quite common mistake is to get too small a churn. It should never be filled more than half of cream. One-third full is better because the cream has a better chance to fall. Before putting in the cream the churn should be scalded with hot water and then rinsed with cold water. The colder the cream is churned the less butter-fat will be left in the butter-milk and the more perfect will be the granules of butter. Cream from shallow setting can be churned at a somewhat lower temperature than that from deep setting.

To make butter float well, so that the butter-milk can be drawn off, throw in some salt, say one pint to each 20 gallons in the churn. Then revolve the churn a few times. Draw off the buttermilk through a hair sieve, so as to catch the granules of butter that escape from the churn.

Wash the butter twice each time using ten or twelve quarts of water to every 20 pounds of butter and revolve the churn a few times. Do not wash it more, nor let the water stay on a great while at a time, for this will be likely to wash out the flavor and aroma for which fine butter is prized.

Butter should be colored to suit the person for whom it is intended. The general market demands that butter should have a color, the year round, about like that of grass butter in June. The coloring matter should be put in the cream after it is all ready for the churn. When the butter would be nearly white if not colored, as is often the case in winter, about a teaspoonful of color is usually needed for eight pounds of butter. In summer, in times of drought, and in the fall, when cows are partly on dry feed, some coloring may be needed, but very little. It is well to be cautious, as it is better to have too little color than too much.

Good fine dairy salt should be used, and never the common, coarse barrel salt that is used by many; the finished butter should contain about three-fifths of an ounce of salt to the pound. A good way to insure uniform salting is to take the butter out of the churn, drain and press out part of the water on the worker, then weigh the butter and salt one ounce to the pound and work enough to get the salt evenly mixed throughout. Some more water will run off in the working and leave the butter salted about right. In this way it will be found that

one churning will be salted very nearly like every other churning.

Generally speaking, it is better to work butter twice instead of once. The first time it should be worked just enough to mix the salt. After standing four or six hours it should be worked enough to obliterate the streaks and mottles. The second working expels some more of the water, for the salt has had time to draw the moisture together in drops and it is worked out. Such butter will be firmer and better and more satisfactory to the consumer than it usually is when worked but once. One thing should always be borne in mind by the person who is making butter to sell. The butter is for somebody else to eat, and it is for your interest to make it to suit them whether it suits your taste or not.

In cleaning the butter bowl, ladle, worker, churn, and any other wooden utensil, they should first be washed with hot water, then scalded with boiling water or steam. They should be aired, but it will not do to have them much exposed to the sun, as that will cause working and cracking.

Milk, Ass's, 4, 15.

Composition of cow's, 5, 236.
 human, 5, 236.

Cows' for children, 2, 52.
 To modify, 2, 52.

Human, 5, 236.

Sugar, 5, 236.

Milkweed, 5, 67.

Milky Way, 5, 138.

Mill, John Stuart.—(1806–1873.) A celebrated English economist, logician, and philosopher. Among his most popular writings are his "Logic," "Essay on Liberty," and "Political Economy."

Millais, Sir John Everett, English artist, 9, 286, 288.

Picture of a dog by, 1, 146.

Mill-Boy of the Slashes.—A name applied to Henry Clay indicative of his humble condition in early life.

Millbury.—A town in Worcester Co., Mass. Pop. (1900), 4,460.

Milledgeville.—The capital of Baldwin Co., Ga., on the Oconee River. It was state capital before 1868. Pop. (1900), 4,219.

Miller, 13, 153.

Miller, Hugh.—(1802–1856.) A Scottish geologist and author. A stonemason in youth, he was self-educated. His last and most important work, "The Testimony of the Rocks," explained the six days of creation as six periods of time of indefinite length.

referred to, 8, 264; 14, 13, 95.

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- Miller, James**, 11, 249.
- Miller, Joaquin** (Originally CINCINNATUS HEINE MILLER).—Born in Wabash district, Ind., 1841. A poet. He removed to Ore. in 1854; was afterward a miner in Cal.; studied law; edited the "Democratic Register" in Eugene, Ore. (1866-70). He took his pseudonym from Joaquin Murietta, a Mexican brigand in whose defense he had written. He was a journalist at Washington, D. C., and returned to Cal. in 1887. His writings include "Songs of the Sierras," "Songs of the Sun Lands," "The Ships in the Desert," "Songs of Italy," and "Songs of the Mexican Sea."
- Miller, Joseph**.—(1684-1738.) An English comedian, known chiefly from "Joe Miller's Jest Book," of which he was incorrectly supposed to be the author.
- Miller, Olive Thorne**, 1, 267.
- Miller, Samuel Freeman**, 12, 336.
- Miller, William**.—Born at Pittsfield, Mass., 1782; died in Washington Co., N. Y., 1849. A religious enthusiast, founder of the Millerites or Adventists. He commenced lecturing on the Millennium in 1831.
- Millet, Aimé**.—(1819-1891.) A French sculptor. Many of his works adorn the public buildings, parks, etc., of Paris.
- Millet, Francis Davis**.—An American portrait-painter, born in 1846. He excels in modeling.
- Millet, François**.—(1642-1679.) A renowned Flemish painter.
- Millet, Jean François**.—(1814-1875.) A French artist, the most famous of the Barbizon school. His subjects suggested chiefly toil and poverty. His most famous painting is the "Angelus" widely known through copies, 9, 268, 269.
Early marriage of, 1, 236.
- Milligan Case**, 12, 92.
- Milligram**, 13, 153.
- Milliken's Bend** (La.), Battle of, 12, 93.
- Milliliter**, 13, 153.
- Millimeter**, 13, 153.
- Millinery**, an occupation for women, 7, 420.
- Millionaires of character**, 14, 143.
- Millipedes**, 4, 364.
Characteristics of, 4, 364.
Habits of, 4, 364.
- Mills, Clark**.—Born in Onondaga Co., N. Y., 1815; died at Washington, D. C., 1883. A sculptor. Among his works are equestrian statues of Washington and Jackson at Washington.
- Mills, David O.**, on success, 8, 121.
- Mills, Roger Quarles**, 12, 93.
- Mills Bill**, 12, 337.
- Millville**.—A city in Cumberland Co., N. J., on the Maurice River. It manufactures glass, cotton, etc. Pop. (1900), 10,583.
- Milman, Henry Hart**.—(1791-1868.) An English clergyman and historian. His chief works were an edition of Gibbon, and histories of Christianity during the early centuries.
- Milner, Lord Alfred**, Govt. House, Cape Town, born, 1855. A Balliol man, barrister, journalist on the "Pall Mall Gazette" during the Stead régime; after three years as Financial Under Sec. in Egypt, and five as chairman of Board of Inland Revenue, was appointed governor of the Cape, and high commissioner of South Africa (1897); met President Krüger at the abortive Bloemfontein Conference, May, 1899, and was chief representative of Great Britain in the negotiations preceding the Boer War.
- Milo**.—A Greek athlete, famous for his strength, who lived about 520 B. C. He was six times victor in wrestling at the Olympian games.
- Milreis**, 13, 155.
- Miltiades**.—An Athenian general who died, 489 B. C. in prison, in punishment for having failed in an expedition against Paros. His fame rests upon the victory at Marathon in which he checked the advance of the Persian army under Darius, 10, 195.
- Milton, John**.—(1608-1674.) One of the most celebrated of English poets. In ecclesiastical affairs he was a Puritan, and after the execution of Charles I. he became Latin secretary to the commonwealth under Cromwell. Late in life he became blind and after this misfortune he dictated to his daughters his great epic, "Paradise Lost," upon which his fame chiefly rests.
referred to, 14, 7, 151.
- Milwaukee**.—The largest city in the state of Wisconsin, situated on Lake Michigan, 85 miles north of Chicago. Among the manufacturing interests, its beautiful cream-colored bricks are noted. Its population is largely German.
- Mimosa pudica**, 5, 75.
- Mindanao**.—One of the southern islands of the Philippines, ranking next in size to Luzon.
- Minersville**.—A borough in Schuylkill Co., Pa., on the west branch of the Schuylkill. Pop. (1900), 4,815.
- Minerva**, 10, 89.
- Ming dynasty**, 10, 157.
- Mingpo**, a free port, 10, 161.
- Ming-te**, 10, 151.
- Miniature painting**, 7, 406.

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Miniaturists, Early British, 9, 273.

Mining Engineer, 13, 444.

Mink, Common, 4, 50.

Food of, 4, 50.

Fur of, 4, 50.

Habits of, 4, 50.

Minneapolis.—The capital of Hennepin Co., Minn., on the Mississippi River at the Falls of St. Anthony. It is the largest city in the state; is noted for its manufactures of flour and lumber; has also iron-works; is the seat of the University of Minn., and of Augsburg Theological Seminary (Lutheran). Pop. (1900), 202,718.

Minnehaha, Falls of.—A cascade in the Minnehaha River near Minneapolis, Minn. Height, 60 feet.

Minnesingers (love singers).—German lyric poets and singers of the 12th and 13th centuries; they sang chiefly of love and war, for the entertainment of the nobility, playing their own accompaniments on the viol.

Minnesota.—One of the North Central States of the U. S. Bounded on the north by British America, east by Wis. and Lake Superior, south by Iowa, west by the two Dakotas. The region was explored by the French in the 17th century. Minn. was formed from part of the Northwest Territory and part of the Louisiana Purchase; organized as a territory in 1849 and admitted as a state in 1858; it was the scene of the Sioux Massacre and War in 1862-63. The surface is undulating and the soil productive; it is one of the leading states in the yield of wheat; agriculture and lumbering are the chief industries. It has 80 counties; St. Paul is the capital and Minneapolis is its other large city; these cities are so near each other that they are growing together; there is the keenest rivalry between them and no doubt the time is not remote when they will be united; other leading towns are Duluth, Winona, Stillwater, Mankato and St. Cloud. Area, 83,365 sq. miles; pop. (1900), 1,751,394; called the North Star State, also the Gopher State.

Minnesota, University of.—A coeducational institution of learning at Minneapolis, chartered in 1838.

Minnesota River.—A river in Minn. which joins the Mississippi about seven miles southwest of St. Paul. Length, about 450 miles.

Minnetonka, Lake.—A small lake about 12 miles west of Minneapolis.

Minnow, The, 4, 302.

Minorca.—The second largest island of the Balearic group, in the Mediterranean Sea. Capital, Fort Mahon. Area, 293 square miles.

Minors under the law, 13, 130.

Minos, 10, 87, 106.

Minotaur.—In Greek mythology, a monster represented as having the body of a man and the head of a bull, 10, 109.

Minot's Ledge.—A reef near the entrance of Massachusetts Bay, 15 miles southeast of Boston. It has a lighthouse.

Mint, 5, 67.

Wild, 5, 68.

Minto, Earl of, born, 1848. Served with Turkish army (1877), in the Afghan War, the first Egyptian Campaign, and the Canadian Rebellion of 1885; gov.-gen. of Canada in 1898.

Mints, where located, 13, 164.

Minutemen, 11, 118.

Miocene epoch, 5, 466.

Miohippus, 5, 466.

Mirabeau, Comte de (GABRIEL HONORÉ RIQUETTI).—(1749-1791.) The greatest orator of the French Revolution, 10, 343; 14, 349.

Miranda Plot, 11, 61.

Mirrors in parlors, 1, 14.

Miser and Plautus, English fable, 3, 199.

Missa Solemnis, 9, 91.

Missionary Ridge (Tenn.), Battle of.—An action of the Civil War notable for the gallantry of the assailants and the completeness of the victory. After its defeat at Chickamauga (Sept. 19-20, 1863), the Union army was for two months closely beleaguered in Chattanooga. The Confederate army under Bragg occupied a very strong fortified position, extending four miles along the crest of Missionary Ridge, and also covering Lookout Mountain. Early in Nov., Bragg weakened his force by sending Longstreet with 16,000 men to operate against Knoxville, while the Federal army was largely augmented by the arrival of Grant and Sherman with 25,000 men from Vicksburg, and Hooker with 20,000 from the Army of the Potomac. Gen. Grant directed the operations. Nov. 24, occurred the battle of Lookout Mountain (which see) and Sherman made a vigorous but unsuccessful attempt to carry the north end of the Ridge. Nov. 25, four divisions of the Army of the Cumberland were formed for a charge and, about the middle of the afternoon, were ordered to take the line of Confederate rifle-pits skirting the foot of the Ridge. This was quickly done. The troops had no orders to proceed farther, but they found themselves exposed to a galling, plunging fire from the Confederates on the crest. They could not stay where they were, they would not retreat, and they went forward up the Ridge, with loud yells. Grant and Thomas were standing together on Orchard Knob.

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"Why, Thomas," exclaimed Grant in surprise, "they are going right up the Ridge!" "Well," replied "Old Pap," quietly, "let 'em go!" The Federals swept like a wave over the crest, piercing the hostile line simultaneously at three points. The Confederates at once began to crumble away and soon the whole army was in disorganized retreat. The Federals captured 40 pieces of artillery and more than 6,000 prisoners. In the operations from Nov. 24 to Nov. 29 the total Confederate loss was 9,500; that of the Federals, nearly all killed or wounded, was 5,600.

Mississippi.—One of the Southern Gulf States of the U. S. Bounded on the north by Tenn., east by Ala., south by the Gulf of Mex. and La., and west by La. and Ark. The region was visited by De Soto in 1540, which was 130 years earlier than the expedition of Marquette and La Salle down the Mississippi River; the first permanent settlement was made by the French on the site of Natchez, in 1716; the territory was ceded by France to Great Britain in 1763, and by the latter to the U. S. in 1783; Mississippi Territory was organized in 1798 and admitted as a state in 1817. Miss. seceded Jan. 9, 1861, and was one of the seven states that organized the Confederate states of America; readmitted to the Union in 1870. The people suffered much from the raids and campaigns of the Union army during the Civil War; the most notable event within its limits was the siege of Vicksburg, which Gen. Pemberton surrendered to Gen. Grant, July 4, 1863, with 30,000 prisoners. It is a purely agricultural state, cotton being the principal product; Jackson is the capital; it has no city which has a population as large as 15,000; chief towns, Vicksburg, Meridian, Natchez, Greenville, and Columbus. It has 76 counties; area, 46,810 sq. miles; pop. (1900), 1,551,270. It is called the Bayou State.

Mississippi.—The largest river of North America. Its source is in or near Lake Itasca, northern Minn. It traverses part of Minn.; forms the boundary between Minn., Ia., Mo., Ark., and La. on the west, and Wis., Ill., Ky., Tenn., and Miss. on the east; flows south and empties into the Gulf of Mexico by 5 mouths. It is navigable for steamboats to the Falls of St. Anthony, Minn. Its chief tributaries are the Minnesota, Des Moines, Missouri, St. Francis, Arkansas, White, and Red rivers from the west, and the Wisconsin, Rock, Illinois, Ohio, and Yazoo rivers from the east. The chief cities on its banks are St. Paul, Minneapolis, Dubuque, St. Louis, Memphis, Vicksburg, Baton Rouge, and New Orleans.

Length of the Mississippi to Lake Itasca, 2,547 miles. With its chief tributary, the Missouri, it is 4,300 miles in length and drains an area of 1,726,000 square miles. The Amazon, which is without doubt the widest river in the world, is 4,000 miles long and drains 2,330,000 square miles.

Mississippi Bubble.—A speculative scheme formed under the leadership of John Law for paying off the national debt of France. It resulted in a financial panic in 1720.

Mississippi River Commission.—A board existing under the auspices of the U. S. Government, the duty of which is to devise and recommend from time to time such measures as may be necessary to maintain the safe navigability of the Mississippi River.

Mississippi River Commission, 12, 337.

Mississippi Sound.—A part of the Gulf of Mexico lying south of Miss., and partly inclosed by a chain of islands.

Mississippi Valley.—The region drained by the Mississippi and its affluents, between the Alleghanies on the east and the Rocky Mountains on the west.

Missolonghi.—A town in the monarchy of Acarnania and Ætolia, Greece. Byron died there in 1824.

Defense of, 10, 362.

Missoula.—A river in western Mont., which unites with the Flathead to form Clarke's Fork

Missouri.—One of the Central States of the U. S. of America. Bounded on the north by Iowa, east by Ill., Ky., and Tenn., south by Ark., west by Ind. Ter., Kan., and Neb. The region was claimed by the French by virtue of exploration; first settled at St. Genevieve about 1755; was ceded to Spain in 1763 and back to France in 1800, and was part of the Louisiana Purchase of 1803; Missouri Territory was formed in 1812 and was admitted into the Union in 1821. The state adhered to the Union during the Civil War, 1861-65, though it was claimed by the Southern Confederacy and was represented in its Congress. It furnished many volunteers for both sides, but much the larger for the Union army. The southern half of the state was over-run by the hostile armies during the war and the people suffered great loss and damage. The principal battle fought on its soil was that of Wilson's Creek, in August, 1861, at which Gen. Nathaniel Lyon, the Union commander, was killed. The state is rich in mineral wealth, yielding iron, lead, and coal; corn, wheat, tobacco, and oats are the staple agricultural products; stock raising is a leading industry. It has 114 counties; Jefferson City is the capi-

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tal and St. Louis is the chief city; other large towns are Kansas City, St. Joseph, Springfield, Sedalia, Hannibal, and Joplin. Area, 69,415 sq. miles; pop. (1900), 3,106,665.

Missouri.—The largest tributary of the Mississippi River. It flows through Mont. and the Dakotas, traverses Mo., and unites with the Mississippi 17 miles north of St. Louis. The chief cities on its banks are Bismarck, Yankton, Sioux City, Omaha, Council Bluffs, St. Joseph, Atchison, Leavenworth, and Kansas City. Length, 3,047.

Missouri Compromise, 11, 392.

Mitchel, Ormsby McKnight.—Born in Ky., 1810; died at Beaufort, S. C., Oct. 30, 1862. Before the Civil War he gained high repute as an astronomer. In 1845 he became Director of the Cincinnati observatory, and later of the Dudley observatory at Albany, N. Y. He wrote several books and treatises on astronomical science which are of great value. In 1861 he entered the Union army and engaged in the war with great enthusiasm. He was made brig.-gen. in 1861, and maj.-gen. in 1862. He commanded a division of Gen. Buell's army, and showed wonderful enterprise and ability. He was sent with his division to break the Memphis and Charleston Railroad, and swept it from Decatur, Ala., to Bridgeport, burning bridges and destroying engines and cars. He was sent to command in S. C., but was seized with Yellow fever and died as stated above.

Mitchell, Donald Grant (*pseudonym*, IK MARVEL).—Born at Norwich, Conn., 1822. An essayist and novelist. He graduated at Yale (1841); studied law in N. Y.; was consul at Venice (1853-55); has since lived on his farm, Edgewood, near New Haven, Conn. His works include "Reveries of a Bachelor," "Dream Life," "My Farm of Edgewood," and "Rural Studies."

Mitchell, Elisha.—Born at Washington, Conn., 1793; died in the Black Mountains, N. C., 1857. A chemist, surveyor, and clergyman, noted for his explorations of the mountains of N. C.

Mitchell, Maria.—Born at Nantucket, Mass., 1818; died at Lynn, Mass., 1889. An astronomer. She was professor of astronomy at Vassar College, Poughkeepsie, N. Y., from 1865, received the degree of LL.D. from Dartmouth in 1852, and from Columbia in 1887; was the first woman elected to the American Academy of Arts and Sciences; was a member of several scientific associations.

Mitchell, Mrs. (LUCY MYERS WRIGHT).—Born at Urumiah, Persia, 1845; died at Berlin, Germany, 1888. An American archæologist. She wrote "A History of Ancient Sculpture."

Mitchell, Mt.—The highest mountain in the U. S. east of the Rocky Mts., situated in the Black Mts., Yancey Co., N. C. Height, 6,710. It is named from Prof. Elisha Mitchell who perished while exploring the mountain (1857).

Mitchell, Silas Weir.—(1829-) An eminent American author and physician.

Mite, Characteristics of the Cheese, 4, 321.

Mites and Ticks, 4, 31.

Mitford, Mary Russell.—(1787-1855.) A noted English author.

Mithridates, "The Great."—Born, about 132 B. C.; died, 63 B. C. King of Pontus 120-63. One of the greatest warriors of ancient times, 10, 218.

Mithridatic wars, 10, 218.

Mitral valve, 1, 281.

Mitre-wort, 5, 47.

Mixture, Mechanical, 5, 152.

Mnemon, 10, 189.

Mobile.—(1) The capital of Mobile Co., Ala., on the Mobile River. It is the largest city of the state and its only seaport, has large trade in timber, naval stores, coal, etc., and exports large quantities of cotton. Pop. (1900), 38,469. (2) Mobile Bay.—An inlet of the Gulf of Mexico, in the southwestern part of Ala. Length about 36 miles. (3) Mobile Point.—A sandy point at the eastern entrance of Mobile Bay, the site of Fort Morgan.

Mobile, Capture of.—See FARRAGUT, DAVID GLASGOW.

Mobile Bay (Ala.), Battle of, 12, 93.

Moccasin, the snake, 4, 245, 248.

Water, 4, 249.

Characteristics of, 4, 249.

Moccasin Flower, 5, 27.

Moccasin Point (Tenn.).—A point of land formed by a sharp bend in the Tennessee River near Chattanooga, and famous during the military operations there in 1863. On it was located a powerful Federal battery, the guns of which were trained on Lookout Mountain while the latter was held by the Confederates.

Mockernut, The, 4, 448.

Mocking Bird, The, 4, 153.

Eggs of the, 4, 118.

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Shell, Modeling a, 7, 108.

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Tiles, 7, 96.

and Borders, 7, 105.

Fruit and vegetable, 7, 100, 101.

Venus of Milo, 7, 98.

Modeling, Geometrical, 7, 239.

in cardboard, 7, 239.

Modeling in Wax and Clay, Artistic, 1, 227.

Modena.—An important city in Italy and the Panaro. Capital of a province of the same name.

Modesty, False ideas of, 2, 434.

Training in, 2, 426.

Modjeska, Helena.—Born, 1844. A noted Polish actress.

Modoc Indians.—A tribe of the Lutuamian family, which, with the Klamaths, formerly occupied the region of the Klamath Lakes and Sprague River, Ore., and extended southward into Cal. They began attacks on the whites as early as 1847. Hostilities continued until 1864,

when they ceded their lands and agreed to go on a reservation.

Modocs.—A tribe of North American Indians which formerly occupied the valleys of Lost River and its tributaries, and the shores of Little Klamath, Modoc, and Clear lakes. After their conflict with the U. S. in 1872-73, about 80 of the Modocs were removed to Ind. Ter. The remainder, about 140, have resided since 1869 near Yaneks on Sprague River, Klamath reservation, Ore.

Modoc War, 12, 337.

Moguls.—A Mohammedan Tartar empire in India.

Mohacs, Battle of, 10, 306.

Second, 10, 328.

Mohair, 4, 27.

Mohammed, or **Mahomet** ("The praised one").

—The founder of Mohammedanism. Born at Mecca, Arabia, about 570, died at Medina, Arabia, 632.

Mohammed II., 10, 288.

Flight of, 13, 102.

Life of, 3, 386.

the author of Arabic legends, 3, 214.

Mohammedan oath, 12, 346.

year, 13, 102.

Mohammedans defeated in Portugal, 10, 285.

Moharrem, 13, 103.

Mohave Indians.—A tribe of the Yumans, living along the lower Colorado River in Arizona. About a third of them are on a reservation. They number in all about 2,000.

Mohawk Indians.—A tribe of the Iroquois family. The name is said to be derived from the Algonquin word "maqua," meaning "bears." Early settlers found them occupying the territory now included in N. Y., extending from the St. Lawrence River to the Delaware River watershed, and from the Catskills to Lake Erie. Their villages were along the Mohawk River. They were known as one of the Five Nations, and were the first tribe of that region to obtain firearms. The Mohawks were allies of the English in their wars with the French and Americans. In 1784, under Chief Brant, they retired to upper Canada.

Mohawk River.—A river in N. Y. which joins the Hudson 9 miles north of Albany. Length, about 187 miles.

Mohegan Indians.—A tribe of the Algonquin family. They once lived chiefly on the Thames River, Conn., and claimed territory extending into Mass. and R. I. After the destruction of the Pequots in 1637, they laid claim to the latter's lands. The death of King Philip in 1676, left them the only impor-

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- tant body of Indians in southern New England. They finally became scattered, some of them joining the Brotherton Indians in N. Y. The Mohegans are often confounded with the Mohicans and called River Indians.
- Mohican Indians.**—A tribe of the Algonquin family. The name is interpreted both as "Wolf" and "Seaside" people. When first known to the whites, they occupied both banks of the Hudson River, extending from Albany to Lake Champlain. They were distinct from the Mohegans of the Connecticut River. The two tribes are usually confounded under the name of River Indians. They were friendly to the English among the French and British struggles for supremacy in America. They assisted the colonists during the Revolution.
- Molasses**, 5, 234.
- Mold**, 5, 98.
- Mole**, African, 4, 47.
- Black Oregon, 4, 47.
 - Body of the, 4, 46.
 - Common, 4, 46.
 - Duck, 4, 47.
 - Duck-billed platipus, 4, 47.
 - Eyes of the, 4, 46.
 - Food of the, 4, 47.
 - Fur of the, 4, 47.
 - Habits of the, 4, 46.
 - heaps, 4, 46.
 - Senses of the, 4, 46.
 - Shrew, 4, 47.
 - Silver, 4, 47.
 - Star-nosed, 4, 47.
 - Underground passages dug by the, 4, 46.
- Molecules**, 5, 252.
- Size of, 5, 252.
- Moles, Treatment of**, 1, 344.
- Molière** (stage name for JEAN BAPTISTE POQUELIN).—(1622–1673.) A celebrated French dramatist and actor.
- Moline.**—A city in Rock Island Co., Ill., on the Mississippi River. Pop. (1900), 17,248.
- Molino del Rey** (Mexico), **Battle of.**—When the fortifications of Contreras and Cherubusco had been carried, Gen. Scott took up his headquarters at the bishop's castle, overlooking the western approaches to the City of Mexico. The first formidable obstruction was by Molino del Rey. Gen. Worth's division of 3,000 men was detailed for attack upon this and its supporting fortification, Casa de Mata. These were stone buildings strongly fortified and ably defended, the Mexicans contesting every inch of ground. The attack was made on the morning of Sept. 8, 1847. After two hours' fighting, the works were carried and the army of Santa Anna, 14,000 strong, was driven back. The Mexican loss was 2,200 killed and wounded and about 800 prisoners. The American loss was 116 killed, 665 wounded, and 18 missing.
- Moloch**, 10, 83.
- Mollusks**, 4, 369.
- Arm-footed, 4, 370, 374.
 - Bivalves, 4, 369.
 - Characteristics of, 4, 369, 371.
 - Clam, 4, 373.
 - Cloaked, 4, 374.
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 - Cowry, 4, 372.
 - Cuttlefish, 4, 371.
 - Food of the, 4, 370.
 - Fresh-water, 4, 372.
 - Headfooted, 4, 370.
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 - Ship-worm, 4, 374.
 - Snails, 4, 372.
 - Squids, 4, 371.
 - Stomach-footed, 4, 370.
 - Tunic, 4, 374.
 - Univalves, 4, 369.
- Moltke**, Count **Hellmuth Karl Bernhard von.**—(1800–1891.) Prussian field marshal. Prominent in the war of Austria and Prussia against Denmark, in 1864; in the Austro-Prussian War of 1866; and in the Franco-German War of 1870–71.
- Mommsen**, **Theodor.**—(1817–1905.) Famous German historian.
- Mona Lisa**, Portrait of, 9, 240, 242.
- Money** and the elements of banking, 7, 451.
- Continental, 13, 154.
 - Facts concerning, 13, 154.
 - Fiat, 13, 162.
 - Fractional paper, 13, 164.
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 - in the United States, 7, 459.
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Habits of the, 4, 63.

Howling, 4, 66.

Language of the, 4, 66.

Professor Garnier's study of the,
4, 66.

South American spider, 4, 66.

Monmouth.—The capital of Warren Co., western Ill.; the seat of Monmouth College (United Presbyterian). Pop. (1900), 7,460.

Monmouth (N. J.), Battle of, 11, 118.

Monmouth, Duke of, 10, 326.

Monocacy (Md.), Battle of, 12, 94.

Monometallism, 13, 156.

Monotremes, 4, 11.

Monroe.—The capital of Monroe Co., Mich., on the Raisin River. Pop. (1900), 5,043.

Monroe, James, 11, 261.

Presidency of, 11, 268.

Monroe Doctrine, 11, 261, 269.

Montague, Lady Mary Mortley, Letters of, 1, 87.

Montaigne, Michel Eyquem de.—(1533-1592.) Famous French essayist, 14, 149.

Montana.—One of the Western states of the U. S. of America, and one of the largest in the Union, being about 18 times as large as Mass. Bounded on the north by Canada, east by the two Dakotas, south by Wyo. and Id., west by Id. It was part of the Louisiana Purchase, and the larger portion of it was for a time included in the Territory of Neb.; Mont. Ter. was formed in 1864, and was admitted as a state in 1889. The surface is greatly diversified, much of it being mountainous, with fine plateaus and fertile valleys admirably adapted to grazing; mining and wool growing are the chief industries; the metal products are chiefly copper, gold, and silver. Helena is the capital, and other leading towns are Butte, Great Falls, Missoula, and Anaconda; has 24 counties; area, 146,080 sq. miles; pop. (1900), 243,329. Called the Sage Brush State.

Montanes, Juan Martinez, 9, 389.

Montauk Point.—The easternmost point of Long Island, N. Y., where the U. S. troops were encamped upon their return from Cuba in 1898.

Montauks.—A tribe of North American Indians, formerly occupying the eastern end of Long Island.

Mont Blanc.—The highest mountain of the Alps, situated in the department of Haute-

Savoie, France, and Piedmont, Italy. Height, 15,781 feet.

Montcalm, General, 10, 341.

Mont Cenis.—A mountain pass of the Graian Alps, between France and Italy; famous for its tunnel.

Montclair.—A township in Essex Co., N. J. Pop. (1900), 13,962.

Montebello, Battle of, 14, 358.

Monte Carlo.—A winter health-resort, noted for its gambling operations. It is situated on the promontory of Monaco, 9 miles northeast of Nice, France.

Montefiore, Sir Moses Haim.—(1784-1885.) An Anglo-Jewish philanthropist. Born at Leghorn, Italy, he removed to London where he acquired a large fortune as a stockbroker. Retiring from business in 1824 he devoted his wealth and his time for the remainder of his life to improving the condition of the Jews.

Montenegro.—A principality of Europe bordering on the Adriatic Sea. The surface is mountainous and its chief industry is cattle raising. For more than four centuries it has been almost continuously at war with Turkey. Area, about 3,630 square miles. Pop. about 240,000.

Monterey.—A city of Mexico famous for its capture in 1846 by the United States troops under General Taylor.

Monterey.—A village in Monterey Co., Cal., on the Bay of Monterey. It is a noted winter and health resort. Pop. (1900), 3,420.

Monterey (Mexico), Battle of.—The Mexican army under Arista, driven across the Rio Grande, took refuge in Matamoros. Gen. Taylor, receiving reinforcements, demanded the surrender of the city, but Arista, unable to hold it, retreated to Monterey. Aug. 18, 1846, Taylor with a force of 6,600 advanced and Sept. 19, encamped in sight of Monterey. The city was strongly fortified and garrisoned by 10,000 Mexicans, mostly regulars under Gen. Ampudia. The attack was begun by the Americans, Sept. 21, and on the following day the city was forced, the Mexicans stubbornly retreating from square to square. The fighting continued during the 22d and 23d, when Gen. Ampudia surrendered the place and was allowed to retire with his army.

Montespan, Madame de, 10, 410.

Montesquieu, Baron de la Brède et de.—(1689-1755.) A famous French statesman and author. He was received into the Academy in 1728.

Montevideo.—Capital of Uruguay and an important commercial center with a population of about 250,000.

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- Montezuma.**—(1477-1520.) An Aztec warrior who ruled over Mexico at the time of the Spanish conquest under Cortés. He was seized by the invaders and held as a hostage. While counseling his people to avoid violence he was struck by stones thrown by the mob, and died from the wounds. The Indians have since regarded him as a god.
- Montfort, Simon of.**—(1208-1265.) An English general and statesman. Through his wife Eleanor he became earl of Leicester. In 1240 was a prominent crusader. He was a leader of the barons in the quarrel with King Henry III., and is popularly regarded as the "father of parliament."
- Montgolfier** (*môŋ-gol-fyā'*).—(1745-1799.) A French inventor, who collaborated with his brother in the construction of an air balloon for which achievement both brothers were elected corresponding members of the Academy.
- Montgomery.**—The capital of Ala., and of Montgomery Co., on the Alabama River. It has a flourishing trade in cotton. Pop. (1900), 30,346.
- Montgomery Charter.**—A charter granted to the city of New York, by John Montgomery, under George II., dated Jan. 15, 1730.
- Month, 5, 125.**
 Lunar, 5, 125.
 Jewish, 13, 102.
 Mohammedan, 13, 103.
- Monticello.**—The name given to the home of Thomas Jefferson, near Charlottesville, Va. (See JEFFERSON, THOMAS.)
- Montijo, Eugenie de, 10, 428.**
- Montreal.**—The largest city and chief commercial center of Canada; situated on Montreal Island in the province of Quebec. Pop. (1901), 267,730.
- Montreal (Can.), Capture and Loss of, 11, 119.**
- Monument.**—The highest monument in the world is the Washington monument, being 555 feet. The highest structure of any kind is the Eiffel Tower, Paris, finished in 1889, and 989 feet high.
- Monumental City.**—A name given to the city of Baltimore, Md., because of its many public monuments, of marble and granite.
- Moody, Dwight Lyman.**—Born at Northfield, Mass., 1837; died, 1899. An evangelist. He was engaged in missionary work in Chicago about 1856; conducted revival meetings with Ira D. Sankey in the U. S., and in Great Britain; established a school for Christian workers in Northfield, and a Bible Institute in Chicago, 14, 34, 68.
 on "Early Marriage," 1, 235.
- Moody, William Henry, 12, 337.**
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- Moore, Alfred.**—Born in Brunswick Co., N. C., 1755; died at Belfont, N. C., 1810. A jurist, associate-justice of the U. S. Supreme Court (1799-1805).
- Moore, Clement Clarke.**—Born at N. Y., 1779; died at Newport, R. I., 1863. A scholar and poet. In 1818 he endowed the General Theological Seminary (Protestant Episcopal) on condition that its buildings should be erected on a part of his property in Chelsea Village (9th and 10th Aves., and 20th and 21st Sts.) He was professor of biblical learning there, and afterward of Oriental and Greek literature (1821-50). He published "Hebrew and Greek Lexicon," "Poems," and was the author of the verses "'Twas the night before Christmas."
- Moore, George Henry.**—Born at Concord, N. H., 1823; died at N. Y., 1892. A historical writer, son of J. B. Moore. He became superintendent of the Lenox Library in N. Y. in 1872. His works include "Notes on the History of Slavery in Mass.," and "History of the Jurisprudence of N. Y."
- Moore, Jacob Bailey.**—Born at Andover, N. H., 1797; died at Bellows Falls, Vt., 1853. A historian. His specialty was the history of N. H.
- Moore, Sir John.**—(1761-1809.) British General, active in the American Revolution; also at Corsica, 1793-94; and Portugal, 1808; killed at the battle of Corunna.
- Moore, Thomas.**—(1779-1852.) Celebrated Irish poet, 14, 38
- Moors.**—A dark-colored race dwelling chiefly in northern Africa. They are a mixture of half a dozen different peoples, the ancient Mauri and the Arabs predominating, from the former of whom they derive their name. Near the close of the Middle Ages they overran Spain, and in Spanish history the words Moors, Arabs, and Saracens, are practically synonymous. They are fine specimens of physique but are characterized by voluptuousness and cruelty.
 Europe's debt to the, 10, 239.
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 in Spain, 10, 238.

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- Moose**, 4, 28.
 Size of the, 4, 28.
 yard, 4, 29.
- Moose-bird**, 4, 152.
- Moosehead, Lake**.—The largest lake in Me.; and the source of the Kennebec River. Length, about 35 miles. Greatest breadth, about 10 miles.
- Moosilauke**.—A mountain in Benton, N. H.; height, 4,810 feet.
- Moquette carpet**, 1, 33.
- Moral discipline by Nature**, 2, 223.
 laws, Inevitable reactions of, 2, 225.
 nature affected by punishments, 2, 225.
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 weakness of children, 2, 246.
- Moran, Edward**.—Born at Bolton, England, 1829. An English-American marine and figure painter. He came to America in 1844.
- Moran, Leon**.—Born at Philadelphia in 1863. A marine and figure painter, son of Thomas and pupil of Edward Moran.
- Moran, Percy**.—Born at Philadelphia in 1862. A *genre* painter, son of Thomas and pupil of Edward Moran.
- Moran, Peter**.—Born at Bolton, England, 1842. An English-American painter of landscape and animals, brother and pupil of Edward and Thomas Moran.
- Moran, Thomas**.—Born at Bolton, England, 1837. An English-American landscape-painter, brother and pupil of Edward Moran. He came to America in 1844. Many of his subjects are from Yellowstone Park and from Mexico, 9, 331.
- Morat, Siege of**, 10, 276.
- Moravia**.—A crown-land of the Cisleithan division of Austria-Hungary.
- More, Hannah**.—(1745-1833.) A noted English writer on religious topics.
- More, Sir Thomas**.—(1478-1535.) English philosopher and statesman; executed on Tower Hill. He is known chiefly at the present time as the author of "Utopia."
- Morea taken by the Turks**, 10, 340.
- Moreau, Jean Victor**.—(1761-1813.) Famous French general, distinguished in the Napoleonic wars.
- Moretto**, 9, 251.
- Morey Letter, The**, 12, 337.
- Morgan, Daniel**, 11, 119.
- Morgan, Edwin Dennison**.—Born at Washington, Mass., 1811; died at New York, 1883. A merchant and politician. He was governor of N. Y. (1859-62), and U. S. senator from N. Y. (1863-69).
- Morgan, George Washbourne**.—(1823-1892.) A distinguished Anglo-American organist.
- Morgan, John Hunt**, 12, 94.
- Morgan, John Tyler**, 12, 338.
- Morgan, Lewis Henry**.—Born near Aurora, N. Y., 1818; died at Rochester, N. Y., 1881. An ethnologist and archæologist. Among his writings are "League of the Iroquois," and "Systems of Consanguinity and Affinity of the Human Family."
- Morgan, William**.—Died, 1826. A mechanic of Batavia, N. Y., alleged to have been abducted and killed by Free Masons for revealing their secrets.
- Morgan's Raid**, 12, 95.
 riflemen, 4, 30.
- Morgarten, Battle of**, 10, 276.
- Morgen**, German land measure, 13, 156.
- Morley, Rt. Hon. John, M. P.**, London, born, 1839; as man of letters he stands alone among present day writers; was formerly editor of the "Fortnightly," "Pall Mall Gazette," and "Macmillan's Magazine"; has written critical biographies of Voltaire and his contemporaries, and of Burke, Cobden, etc.; as politician was twice Chief Secretary for Ireland, assisting in pacification of the country; has recently finished writing Mr. Gladstone's life.
- Mormons**.—A religious body founded in the United States in 1830, by Joseph Smith. The practice of polygamy is one of the distinguishing features of the organization.
- Morning Glory**, 5, 68.
- Morocco**.—A country in northwestern Africa, bounded on the north by the Mediterranean Sea, east by Algeria, south by the Desert of Sahara, west by the Atlantic Ocean. The Atlas Mountains traverse the country from west to east. The government is administered by a sultan who has despotic power. The religion is chiefly Mohammedan. Area, 170,000 sq. miles; pop., about 8,000,000.
- Moroni**; 9, 251.
- Morphine**, 5, 249.
- Morphy, Paul Charles**.—Born at New Orleans, 1837; died there, 1884. A distinguished chess-player.
- Morrill, Daniel J.**, 14, 218.
- Morrill, Justin Smith**, 12, 338.
- Morrill, Lot Myrick**, 12, 338.
- Morris**.—The capital of Grundy Co., Ill. Pop. (1900), 4,273.
- Morris, Clara**.—Born at Cleveland, Ohio, 1846. A noted actress. She was leading woman at Wood's Theatre, Cincinnati, in 1869; went to New York in 1870; married Fred C. Harriott in 1874. She was most successful in emotional rôles.
- Morris, George Pope**.—Born at Philadelphia, 1802; died at New York, 1864. A journalist and

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poet. With Samuel Woodworth, he founded the New York "Mirror" in 1823 (discontinued in 1842); with N. P. Willis, the "New Mirror" in 1843, and shortly after the "Evening Mirror." In 1845 he founded the "National Press." Its name was changed in a few months to the "Home Journal." He edited this with Willis until shortly before his death. He wrote "Briarcliff," edited "American Melodies," and with N. P. Willis, "The Prose and Poetry of America." Among his best-known poems are "Woodman, Spare That Tree," and "My Mother's Bible."

Morris, Gouverneur, 11, 119.

Morris, Sir Lewis.—Born, 1832. An English poet. Best-known work, the "Epic of Hades."

Morris, Lewis, 11, 119.

Morris, Robert.—Statesman and financier; sketch of, 13, 159.

Morris, William, 14, 241.

Morristown.—The capital of Morris Co., N. J., on the Whippany River. Washington had his headquarters there in the winters of 1776-77, and 1779-80. Pop. (1900), 11,267.

Morse, Edward Sylvester.—Born at Portland, Me., 1838. A zoölogist. He was assistant at the Lawrence Scientific School, Harvard, until 1862; established the "American Naturalist" at Salem about 1866, founded the Peabody Academy of Sciences there, of which he was curator and president in 1881; was professor of comparative anatomy and zoölogy later in the Imperial University of Tokio; was made president in 1885 of the American Association for the Advancement of Science. His writings include "First Book in Zoölogy" and "Japanese Homes."

Morse, Jedidiah, 11, 249.

Morse, Samuel Findley Breese, 5, 337.

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as investments, 7, 448.

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Morton, Levi Parsons, 12, 338.

Morton, Nathaniel.—Born, about 1613; died at Plymouth, Mass., 1685. A historian, compiler of "New England's Memorial."

Morton, Oliver Perry, 12, 338.

Morton, Paul, 12, 181.

Morton, President Henry, on "Specialism," 9, 93.

Morton, William Thomas Green.—Born at Charlton, Mass., 1819, died at New York, 1868. A noted dentist. He first administered sulphuric ether as an anesthetic to a patient of

his own in 1846; obtained a patent for its use under the name "letheon" in the same year; on Oct. 16, 1846, administered ether to a patient in the Massachusetts General Hospital at Boston, and Dr. John C. Warren painlessly removed a vascular tumor from the man's neck. Several claimants opposed his right of discovery, notably Dr. Charles Thomas Jackson and Dr. Horace Wells. In 1852 the French Academy of Sciences investigated the matter, and decreed one of the Montyon prizes of 2,500 francs to Dr. Jackson for the discovery of etherization, and the similar award to Dr. Morton for the application of the discovery to surgical operations.

Morus rubra, 4, 468.

Moscow.—Capital of the province of Moscow, formerly capital of Russia, and still the second capital and the place of coronation and the seat of the ecclesiastical government. It is the most important railway center of Russia. The city is built around the Kremlin as its center, which is a large collection of buildings, including fortress, citadel, palace, cathedral, etc. Moscow has been destroyed by fire many times, the last time being in 1812 when the city was burned by the Russians in order to escape capture by Napoleon. In 1703 Peter the Great removed his capital to St. Petersburg, 400 miles to the northwest. Present pop., about 1,000,000.

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 - surroundings, 2, 461.
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- the true education of a child, 2, 444.

Mother Cary's chicken, 4, 234.

Mother Goose.—The name associated with the famous nursery rhymes; according to some authorities, a Mrs. Goose, mother-in-law of Thomas Fleet, an early Boston publisher, who sang the verses to her grandchildren. Other writers discredit this story.

Motherhood, 2, 386.

- and Fatherhood, 2, 392.
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- Education fitting for, 2, 378.
- National Congress, 2, 375.
- Organized, 2, 375.
- Preparation for, 2, 11.
- Professional, 2, 390.
- Profession of, 2, 388.

Mother of Presidents.—A name sometimes applied to Va., the native state of Washington, Jefferson, Madison, Monroe, W. H. Harrison, Tyler, and Taylor.

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Mothers, National Congress of, 2, 375.

- Association with teachers, 2, 455.
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- Cecropia, 4, 347.
- Clear-winged Sesia, 4, 345.
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- Humming-bird, 4, 344.
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- Promothia, 4, 348.
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Motley, John Lothrop, 8, 306.

Motor activity, 2, 98.

Motor children, 2, 315.

Motor cycle, 5, 399.

Motor nerves, 1, 284.

Mott, Mrs. (Lucretia Coffin).—Born at Nantucket, Mass., 1793; died, 1880. A social reformer and preacher in the Society of Friends. She was an abolitionist, a woman suffragist, and an advocate of universal peace.

Mott, Valentine.—Born at Glen Cove, L. I., 1785; died at New York, 1865. A surgeon known as a successful operator. He translated "Velpeau's Operative Surgery," and wrote "Travels," "Mott's Cliniques," etc.

Moulton, Mrs. (Ellen Louise Chandler).—Born at Pomfret, Conn., 1835. A novelist and poet. She married William U. Moulton in 1855. Among her works are "This, That and the Other," "Juno Clifford," and "Some Women's Hearts."

advice to young authors, 8, 234.

Moultrie, William, 11, 122.

Mound Builders.—A prehistoric race of Americans who inhabited the valleys of the Ohio and Mississippi rivers. They are so named because the only traces of their existence are found in mounds of earth formed in regular geometrical shapes, containing ashes, stone and bronze implements, and weapons. Some of these mounds seem to have been simply places of sepulture, while others show unmistakable evidences of having been erected as fortifications. The race probably became extinct only a few generations before the discovery of America, as De Soto found tribes of Southern Indians who built mounds and

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- possessed other characteristics of the extinct race. They belonged distinctly to the Indian race and to the Stone Age.
- Mound City.**—A name given to St. Louis.
- Moundsville.**—The capital of Marshall Co., W. Va., on the Ohio River. It is so named from a notable prehistoric mound in its vicinity. Pop. (1900), 5,362.
- Mountain Ash, The**, 4, 438.
 Bluebird, 4, 158.
 cattle, 4, 17.
 laurel, 5, 12.
 lion, 4, 73.
 tea, 5, 15.
- Mountain Meadows Massacre**, 11, 393.
- Mountains**, How measured, 13, 166.
 Symbolism of, 2, 184.
- Mt. Auburn.**—A noted cemetery in Cambridge and Watertown, Mass.
- Mount Desert.**—An island in the Atlantic belonging to Hancock Co., Me., about one mile from the mainland. Its most noted summer resort is Bar Harbor. Highest point about 1,500 feet above the sea level.
- Mount Holyoke College.**—An institution of learning for women at South Hadley, Mass., founded by Mary Lyon, and opened in 1837.
 Cost of attending, 8, 49.
- Mount Kalasa**, 10, 20.
- Mount Pleasant.**—The capital of Henry Co., Iowa; the seat of German College and Iowa Wesleyan University (both Methodist). Pop. (1900), 4,109.
- Mount Vernon.**—See WASHINGTON, GEORGE, AND WASHINGTON, MARTHA.
- Mount Vernon.**—(1) The capital of Posey Co., southwestern Ind., on the Ohio River; pop. (1900), 5,132. (2) A city in Westchester Co., N. Y.; pop. (1900), 20,346. (3) The capital of Knox Co., Ohio; pop. (1900), 6,633. (4) An estate in Fairfax Co., Va., 15 miles southwest of Washington. It is notable as the residence and place of burial of George Washington. In 1859 it was purchased by the Mt. Vernon Ladies' Association.
- Mourning dove**, Nest of, 4, 115.
 warbler, 4, 186.
- Mouth**, 1, 276.
- Mozambique.**—(1) A province formerly belonging to Portugal, now a part of the state of East Africa, having an area of about 310,000 sq. m., and a pop. of 1,500,000. (2) A small city, capital of the province of the same name, situated on a coral island just off the mainland.
- Mozambique Channel.**—Separates the island of Madagascar from the southeastern coast of Africa. It is about 1,000 miles long and varies from 250 to 550 miles in width.
- Mozart, Leopold**, 9, 124.
- Mozart, Wolfgang**, 9, 124.
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- Mozier, Joseph**, 9, 412.
- "Muck-raking,"** 12, 181.
- Mud as a plaything**, 2, 124.
- Mudhen**, 4, 131.
- Muff, the fan, and the parasol**, Spanish fable, 3, 205.
- Mugwump.**—A corruption of the Algonquin Indian word "mugquomp," which signifies a chief, ruler, or a person of importance. After long use in local politics, the word came into national use in the presidential campaign of 1884. The newspapers applied the term to those Republicans who refused to support James G. Blaine, the regular party nominee, and it has since been used to designate any person of independent politics or who is supposed to be lacking in loyalty to his political party.
- Muhlenberg, Henry Augustus.**—Born at Lancaster, Pa., 1782; died at Reading, Pa., 1844. A clergyman, and Democratic politician, son of G. H. E. Muhlenberg. He was minister to Austria (1838-40).
- Muhlenberg, John Peter Gabriel.**—Born at Trappe, Pa., 1746; died near Philadelphia, 1807. A Revolutionary general and politician, son of H. M. Muhlenberg.
- Muhlenberg, William Augustus.**—Born at Philadelphia, 1796; died at New York, 1877. An Episcopal clergyman, hymn-writer, and hymnologist; great grandson of H. M. Muhlenberg. He was first superintendent and pastor of St. Luke's Hospital, New York. He wrote, among other hymns, "I Would Not Live Away."
- Muh-wang**, Chinese emperor, 10, 148.
- Muir, Sir William**, quoted on Mohammed, 3, 378.
- Mulberry, Red**, 4, 468.
- Mule.**—A hybrid animal; offspring of the male ass and the mare; valued as a beast of burden in many parts of the world.
- Mulford, Elisha.**—Born at Montrose, Pa., 1833; died at Cambridge, Mass., 1885. An Episcopal clergyman and philosophical writer. His works include "The Nation" and "The Republic of God."
- Mullein, Common**, 5, 17.
- Müller, Carl**, 9, 327.
- Müller, Frederick (FRIEDERICH) Maximilian (MAX MÜLLER).**—(1823-1900.) Eminent German philologist and orientalist.

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by aliquot parts, 13, 15.

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Münchhausen, Karl Friedrich Hieronymus von (BARON MÜNCHHAUSEN).—(1720-1797.)

A German soldier who served with the Russians in their war against the Turks. Said to be the author of the "Baron Munchausen's Narrative of His Marvellous Travels and Campaigns in Russia."

Munfordville (Ky.), Battle of, 12, 96.

Munkacsy, 9, 228.

Munn versus Illinois, 12, 338.

Muraena, 4, 300.

Murat, Joachim.—(1771-1815.) Brother-in-law of Napoleon, commander of the French cavalry, one of the most brilliant officers of the period. He became marshal of France and king of Naples. He was defeated and captured by the Austrians and was executed at Pizzo, Italy.

Murdoch, James Edward.—Born at Philadelphia, 1811; died at Cincinnati, 1893. An actor and professor of elocution at the Cincinnati College of Music. He made his first appearance at Philadelphia in 1829. In 1840 he left the stage, and devoted five years to study, reappearing as "Hamlet" in N. Y. When the Civil War broke out, he served the Union as nurse, while his two sons were in the army, and gave readings for the benefit of the U. S. Sanitary Commission.

Murdock, James.—Born at Westbrook, Conn., 1776; died at Columbus, Miss., 1856. A Congregational divine and scholar. He translated works of Mosheim, and the New Testament from the Peshito version.

Murex, The, 4, 371.

Known to the ancients, 4, 371.

Murfree, Mary Noailles (*pseudonym* CHARLES EGBERT CRADDOCK).—Born at Murfreesboro, Tenn., about 1850. A well-known novelist. Among her works are "In the Tennessee Mountains," and "The Prophet of the Great

Smoky Mountains," and "The Story of Keedon Bluffs."

Murfreesboro.—Named from Col. Hardy Murfree, an officer in the Revolutionary War. The capital of Rutherford Co., Tenn. Pop. (1900), 5,531.

Murfreesboro (Tenn.), Battle of.—See STONE RIVER, BATTLE OF, 12, 96.

Murillo, 9, 257.

Murphy, John Francis.—Born at Oswego, N. Y., 1853. A landscape painter, a member of the National Academy of Design and of the American Water Color Society.

Murrain.—A contagious disease which affects most domestic animals except horses. It runs a course of about ten days.

Murray, John.—Born at Alton, 1741; died at Boston, Mass., 1815. A Universalist clergyman, called "the father of American Universalism," 14, 280.

Murray, Lindley.—Born at Swatara, Pa., 1745; died in England, 1826. A noted grammarian. He was admitted to the bar in 1765, afterward accumulated a fortune in commercial pursuits, and in 1784 settled in England. His chief works are "The Power of Religion on Mind" and "English Grammar."

Murray, William Henry Harrison.—Born at Guilford, Conn., 1840. A Congregational clergyman, pastor of the Park Street Congregational Church (1868-74). He was the author of "Camp Life in the Adirondack Mountains," "The Perfect Horse," and "Tales."

Murray Hill.—A district in New York City; beginning at 34th St. and extending to 40th St. It was named from a Quaker family who owned an estate on the site.

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Muscles of the body, 1, 274.

Muscovite, 5, 445.

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Mushroom.—A fungus including a large number of species. The edible species are highly esteemed as an article of food. The poisonous species are popularly called toadstools. Its rapid growth gives rise to the figurative use of the word, meaning "ephemeral."

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 - Singing with older people, 9, 16.
- Music-teachers**, Women as, 7, 369.
- Muskalonge**, 4, 298.
 - Characteristics of, 4, 299.
 - Flesh of the, 4, 300.
 - Where found, 4, 299.
- Musk deer**, 4, 30.
- Muskegon**.—The capital of Muskegon Co., Mich.; on Muskegon Lake, near Lake Michigan. The leading industry is the lumber manufacture and trade.
- Muskingum**.—A river in Ohio, formed by the union of the Tuscarawas and Walhonding rivers at Coshocton.
- Muskmelon**, 5, 73.
- Musk-ox** (*Ovibos moschatus*).—An animal found in the most northern parts of North America along the shores of the Arctic Ocean and south to the 60th parallel. In appearance it combines many of the characteristics of the sheep and the ox. The male exhales a musky odor, hence the name. The animal is covered with long, thick, matted brown hair. The horns have broad bases and are curved downward.
- Muskrat, Musquash, or Ondatra**.—A small quadruped having a musky odor, and resembling in appearance the rat. It has five toes, is web footed, and inhabits rivers and lakes. It burrows in the banks or makes for itself commodious houses out of grasses, etc., its habits being much like those of the beaver. It is

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- found in all parts of North America, and is valued chiefly for its fur.
- Muskrat, The**, 4, 52.
 Flesh of, 4, 53.
 Food of the, 4, 53.
 Fur of the, 4, 53.
- Muslin**.—A thin, delicate, cotton fabric which takes its name from Mosul which is near the site of ancient Nineveh. Very delicate muslins are woven at Dacca, in the East Indies.
- Muspelheim**, 10, 118.
- Musquash**, 4, 52.
- Musset, Alfred de**.—(1810-1857.) A French novelist, playwright, and poet.
- Mustang**, 4, 13.
- Mustard**.—A yellow flowering plant of the genus *Brassica*, valued chiefly for its seeds. The pulverized seeds are made into a paste which is popularly used as a condiment. In medicine mustard is used as a counterirritant in the form of a plaster or poultice, 5, 68.
 Hedge, 5, 60.
- Mycenae**.—An ancient city of Greece in the plain of Argos. It is noted for the remains of antiquity found there by excavation.
- Mylæ, Battle of**, 10, 214.
- "My Policy,"** 12, 338.
- Myriagram**, 13, 153.
- Myriameter**, 13, 153.
- Myriopoda**, 4, 320.
- Myrrh**.—A resinous gum derived from the bark of a spiny shrub, or scrub tree, of various species of *Commiphora*. It is largely used for perfumery and incense. It is grown chiefly in Arabia and eastern Africa.
- Myrtle**.—A genus of *Myrtaceæ*; native of all the countries around the Mediterranean Sea and of the temperate parts of Asia, 5, 4.
- Myrtle warbler**, 4, 186.
- Mysia**.—An ancient province in Asia Minor touching Lydia, Phrygia, Bithynia, and the Ægean. The most important cities in it were Pergamum and Cyzicus. The Mysians were allies of Troy in the Trojan war.
- Mysore**.—A native state in South India. It has few rivers and none of them are navigable. The country is rich in mineral wealth. The capital was Mysore until 1831, when the seat of government was removed to Bangalore.
- Mythology**, 10, 1.
 American Indian, 10, 128.
 Assyro-Chaldean, 10, 48.
 Chinese, 10, 34.
 Egyptian, 10, 65.
 Greek and Roman, 10, 85.
 Hindu, 10, 3.
 Norse, 10, 113.
 Phœnician, 10, 79.
- Mytilene**.—The ancient name of the chief city on the island of Lesbos in the Ægean Sea off the coast of Mysia. It played an important part in the Greek and Persian wars. It was a stronghold of the Venetians in the Middle Ages, but has belonged to Turkey since 1460.
- N**
- Nabonadius**, 10, 182.
- Nabopolassar**, 10, 182.
- Nadir**, 5, 109.
- Nagasaki**.—One of the chief commercial cities of Japan. Pop. (1891), 58,142.
- Nagging a nervous child**, 2, 98, 258.
- Naglee, Henry Morris**.—(1815-1886.) A Union general in the Civil War.
- Naiads**.—In Roman and Greek mythology, female deities presiding over springs and streams.
- Nails**, 7, 157, 210.
- Nairne, Baroness (CAROLINA OLIPHANT)**.—(1766-1845.) A noted Scottish poet.
- Names misspelled in business paper**, 13, 127.
- Nancy**.—Capital of the department of Meurthe-et-Moselle, France. It has manufacturing interests, and contains an interesting cathedral, and the palace of the dukes of Lorraine.
 Siege of, 10, 276.
- Nancy Hanks**.—The maiden name of the mother of Abraham Lincoln.
- Nancy Hanks**.—A fast trotting mare. In 1892 she broke the trotting record of Sunol (2:08 $\frac{1}{4}$) by a mile in 2:05 $\frac{1}{4}$. This she herself lowered to 2:04 in Oct., 1892.
- Nanking**.—Formerly called Kinling, capital of the province of Kiangsu, China.
- Nan-leik**, 10, 158.
- Nansen, Fridjof**.—(1861-) Norwegian Arctic explorer. Author of "Furthest North" (1897).
- Nantasket Beach**.—In Massachusetts; a peninsula of Plymouth Co., projecting into Massachusetts Bay. It is a popular summer resort.
- Nantes**.—One of the important seaports of France; capital of the department of Loire-Inférieure. It has shipbuilding industries, manufactures, and an extensive trade in sugar and tobacco.
 Edict of, 10, 297.

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Nantucket.—(1) An island in the Atlantic, about 25 miles south of the mainland of Mass. Length, 18 miles. Area, about 45 sq. miles. (2) Nantucket Shoals.—A group of dangerous shoals in the Atlantic, southeast of Nantucket. (3) Nantucket Sound.—That part of the ocean which lies between Nantucket on the south, and Barnstable Co., Mass., on the north.

Naphtha, 5, 228.

Naphthalene, 5, 249.

Napier, John.—(1550-1617.) Famous Scotch mathematician; the inventor of logarithms.

Napier, Sir Charles.—(1786-1860.) A distinguished British admiral.

Napkins, To iron, 1, 31.

Naples.—Capital of the province of Naples, Italy, situated on the coast of the Bay of Naples. One of the most beautiful, and the largest, of the Italian cities. Pop. (1893), 532,500.

Napoleon Bonaparte, 10, 346.

A great reader, 8, 145.

Forethought of, 8, 257.

referred to, 14, 2, 7, 19, 99, 157, 175, 217, 263, 358, 362, 367.

Napoleon, Prince, 14, 358.

Napoleon III. of France, 10, 374.

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Nara-Singha avatar, 10, 11.

Narcissus, 5, 68.

Fabled origin of, 1, 199.

in mythology, 10, 95.

jonquilla, 5, 68.

polyanthus, 5, 68.

pseudonarcissus, 5, 68.

White, 5, 68.

Nares, 10, 236.

Nares, Sir George Strong.—Born, 1831; a noted British Arctic explorer and author.

Narraganset Indians.—A tribe of the Algonquin family of Indians, which originally occupied a part of R. I. They were friendly toward the early colonists, their wars being waged mostly against other tribes. Canonicus, their principal chief, gave Roger Williams a large tract of land and otherwise befriended him. Canonicus died in 1647, and King Philip, of the Pequots, induced the Narragansets to join him in a raid on the white settlement, in violation of their treaty. King Philip and his allies, having ravaged the valley of the Connecticut in 1675 and 1676, returned to the land of the Narragansets. They were surrounded by the whites and their villages were burned. Canonchet, the last chief of the Narragansets, was captured and killed. A

few surviving Narragansets intermarried with the colonists and became civilized.

Narragansett Bay.—An inlet of the Atlantic Ocean, indenting the coast of R. I. Length, 27 miles.

Narragansett Pier.—A famous seaside resort in Rhode Island.

Narrows, The.—A strait between N. Y. Harbor and the Lower Bay; it separates Staten Island from Long Island. Width, about 1 mile.

Narva, Battle of, 10, 331, 333.

Narvaez taken by Cortez, 11, 38.

Narychkina, Natalie, 10, 430.

Nasal bones, 1, 273.

Nasby, Petroleum Vesuvius.—The pen name of D. R. Locke, an American political satirist (1833-1888).

Naseby.—A village near Northampton, England. Scene of the defeat, in 1645, of the Royalists under Charles I. and Rupert, by the Parliamentarians under Fairfax and Cromwell; the decisive battle of the English civil war.

Battle of, 10, 321.

Nash, Richard.—(1674-1761.) An English leader of fashion, called "Beau Nash" and sometimes the "King of Bath."

Nashe, Thomas.—(1567-1601.) An English satirical pamphleteer, poet, and dramatist.

Nashville.—Capital of the state of Tennessee and the largest city in the state; an important railroad center, and has an extensive trade in tobacco, cotton, and lumber. Pop., 80,500.

Nashville (Tenn.), Battle of, 12, 96.

convention, 11, 393.

warbler, 4, 186.

Nash, W. A., on "Business Chances," 13, 67.

Nasopharynx, 1, 294.

Nast, Thomas.—(1840-1902.) A noted German-American caricaturist.

Nasturtium, 5, 69.

Garden, 5, 69.

Symbolism of, 1, 199.

Natal.—A British possession in South Africa. It was discovered by Vasco da Gama on Christmas Day, 1497. It was annexed to the British possessions in 1843. The area is 20,460 square miles and the population 543,913.

Natal.—A British colony in South Africa. Capital, Pietermaritzburg; area, 16,570 square miles; pop., about 500,000.

Natick.—A town in Mass., a few miles from Boston. It has manufactures of boots and shoes.

National Academy of Design.—In New York City, instituted in 1826, and incorporated in 1828; its object the cultivation of the fine arts,

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National Academy of Sciences.—The National Academy of Sciences was incorporated under an act of Congress, approved Mar. 3, 1863. It was self-created and retains autonomous powers, but derives national character from the provision in the article of incorporation that "the academy shall, whenever called upon by any department of the government, investigate, examine, experiment, and report upon any subject of science or art, the actual expense of such investigations, examinations, experiments, and reports to be paid from appropriations which may be made for the purpose, but the academy shall receive no compensation whatever for any services to the Government of the United States." The first meeting was held Apr. 22, 1863, and Alexander D. Bache was elected president. The academy holds funds in trust to be applied in aid of scientific investigations or in medals or other prizes for scientific work.

National Airs.—America, in the matter of popular music, is fast acquiring much that is inspiring as well as melodious and pleasing in the department of national song. Some songs we have appropriated and adapted, such as the British national hymn, with its stately music—"God Save the King"—which is dear to the American heart, wedded as it now is to the hymn "America," "My Country 'Tis of Thee." Of our own national songs, we have, however, two distinctively good and familiar, in the "Star Spangled Banner" (though the music of it is British) and "Hail Columbia." The latter was written in 1798 by Judge Joseph Hopkinson, of Philadelphia, at the request of a young actor who wanted a patriotic song adapted to the tune of "The President's March" to sing at a benefit performance. The music to it was composed by Prof. Phylla, musical director at the old John Street theater, New York. Of other American songs the best were written by the late Geo. F. Root, during the early years of the Civil War. The most popular of these are the "Battle Cry of Freedom," "Just Before the Battle," and "Tramp, Tramp, Tramp, the Boys are Marching." Good also is the American hymn, written by G. Mathias Keller, first performed at the Peace Jubilee in Boston in 1869. It gained for its writer a prize of \$500 in a contest to which there were many contributors.

Of the national songs of other countries, reference has been made to "God Save the Queen" (or King), the authorship of which is claimed by Henry Carey, an illegitimate son of the marquis of Halifax. Both words and

music, tradition assigns to Carey (1663-1743), and were, it is said, first sung in honor of a birthday of George II. at a dinner given by the London Mercers' Co. in 1740. This popular air has since been adopted as the national air of Denmark, Norway, Hanover, Weimar, Bavaria, and Switzerland. The Russian national hymn—one of the grandest—was composed by Alexis T. Lvoff (1799-1870) at the suggestion of Emperor Nicholas I., and was given in public at Moscow in 1833. "The Marseillaise" of France was written by Joseph Rouget de Lisle at Strasburg, in 1792, and was composed as a Revolutionary song, two years after the fall of the Bastille. Germany's national air, "The Watch on the Rhine," is the work of Carl Wilhelm (1815-75), written in 1854, but it did not come into vogue until the French and German War. Austria's national hymn was composed about the year 1797 by Joseph Haydn, and the words were written to it by the poet Haschka. One of the popular airs claimed by Italy is "Italia, Italia, Beloved," understood to have been composed by Donizetti; and that of Spain, a comparatively recent song, was composed by Manuel Fenollosa.

National Assembly.—In French history, the first of the Revolutionary Assemblies, existing from 1789-91, 10, 343.

National Bank opposed by Jefferson, 11, 179.

National Board of Health.—Congress by an act approved Mar. 3, 1879, established a National Board of Health, consisting of seven civilian physicians, one army surgeon, one navy surgeon, one surgeon of the Marine Hospital service and one officer of the Department of Justice. This board was later abolished. A national quarantine law was passed June 3, 1879.

National convention, 12, 441.

debts of the world, 12, 352; 13, 167.

Guard, 12, 339.

Nationalism, Growth of, 11, 1.

Bismarck and the war with Austria, 11, 6.

Headship of Prussia in Germany, 11, 5.

Liberation of the provinces along the Danube, 11, 12.

Napoleon III. invites war over the Spanish Crown, 11, 8.

Patriotic aims of Victor Emmanuel and Carout, 11, 3.

Turco-Russian War, 11, 10.

Unification of the German Empire, 11, 9.

Nationality, 12, 338.

National Museum.—Established at Washington by act of Congress in 1877, for the preservation and exhibition of government scientific

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collections such as those in natural history, ethnology, etc. The building was erected in 1889. The secretary of the Smithsonian Institution is keeper of the National Museum.

National Parks, 12, 339.

National Party.—A name of the Greenback-Labor party.

National University.—Several of the Presidents have recommended in their messages the establishment of a national university. Washington disapproved of foreign education for American youth, and early conceived the idea of such an institution. He bequeathed 50 shares of the Potomac Company toward fund for such a purpose, but the stock proved valueless, for the enterprise was abandoned. Several times since Washington's day attempts have been made to set on foot such an enterprise, but it has not advanced beyond the theoretical stage.

Natural Bridge.—A limestone arch crossing a small river in Rockbridge Co., Va. Height of arch, 215 feet.

Naturalization Law, 12, 340.

Requirements for voters, 12, 429.

Natural Selection, Theory of, 4, 9.

Nature's Barometers.—Certain movements on the part of the animal creation before a change of weather appear to indicate a reasoning faculty. Such seems to be the case with the common garden spider, which, on the approach of rainy or windy weather, will be found to shorten and strengthen the guys of his web, lengthening the same when the storm is over. There is a popular superstition that it is unlucky for an angler to meet a single magpie, but two of the birds together are a good omen. The reason is that the birds foretell the coming of cold or stormy weather, and at such times, instead of searching for food for their young in pairs, one will always remain on the nest. Sea-gulls predict storms by assembling on the land, as they know that the rain will bring earthworms and larvæ to the surface. This, however, is merely a search for food, and is due to the same instinct which teaches the swallow to fly high in fine weather, and skim along the ground when foul is coming. They simply follow the flies and gnats, which remain in the warm strata of the air. The different tribes of wading birds always migrate before rain, likewise to hunt for food. Many birds foretell rain by warning cries and uneasy actions, and swine will carry hay and straw to hiding-places, oxen will lick themselves the wrong way of the hair, sheep will bleat and skip about, hogs turned out in the woods will come grunting and squealing, colts will rub

their backs against the ground, crows will gather in crowds, crickets will sing more loudly, flies come into the house, frogs croak and change color to a dingier hue, dogs eat grass, and rooks soar like hawks. It is probable that many of these actions are due to actual uneasiness, similar to that which all who are troubled with corns or rheumatism experience before a storm, and are caused both by the variation in barometric pressure and the changes in the electrical condition of the atmosphere.

Nature Study, Advantages of, 4, 3.

Collecting specimens, 4, 5.

Value in child training, 2, 291.

Naugatuck.—A town in Conn. Pop. (1900), 10,541.

Nausett Beach.—A long stretch of beach on the eastern coast of Cape Cod, Mass.

Nautilus, The, 4, 371.

Nauvoo.—In Ill. A town in Hancock Co., on the Mississippi River; founded in 1840 by the Mormons, who were driven out in 1846.

Navajo Indians.—An important tribe of the southern division of the Athapaskan stock of Indians. From the time of their earliest discovery by the whites, they have occupied the country along the south of the San Juan River, in northern N. Mex. and Ariz., and extending into Col. and Utah. They were surrounded by the Apache tribes except on the north, and the Shoshones were their neighbors. The Navajos are at present confined to the Navajo reservation in Utah, N. Mex., and Ariz.

Navajo blankets, 1, 34.

Naval Academy, 12, 342.

Militia, 12, 342.

Naval Observatory.—A Government institution founded at Washington in 1842 and under the supervision of the Navy Department. It has published many volumes of astronomical observations, and since 1855 an annual nautical Almanac. Important discoveries have been made by its 26-inch equatorial telescope, notably Asaph Hall's discovery of the satellites of Mars.

War College, 12, 342.

Navarino, Battle of.—Fought Oct. 20, 1827; the English, French, and Russian fleets, united for the protection of Greece entered the harbor of Navarino and destroyed the Turkish-Egyptian fleet, 10, 363.

Navarre.—An ancient kingdom which comprised the modern province of Navarre in Spain and a part of the department of Basses-Pyrénées in France.

Kingdom of, 10, 243.

Navigation Act, 11, 249.

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- Navy**, A career in the, by Winfield Scott Schley, 13, 430.
 Department, 12, 396.
 of the United States, 12, 343.
 Yards, 12, 344.
- Naxos**, or **Naxia**.—(1) In the Ægean Sea, an island of the Cyclades, Greece; noted for its fine wines. (2) The chief town of the island of Naxos.
 Battle of, 10, 200.
- Nazareth**.—In ancient geography a town in Galilee, Palestine, celebrated as the dwelling-place of Jesus during his early life.
- Nazarette**.—A borough in Northampton Co., Pa.; the seat of a Moravian Academy.
- Naze, The**.—A cape in the eastern extremity of England, 64 miles northeast of London.
- Neal, David Dolloff**.—Born at Lowell, Mass., 1837. An American figure-painter.
- Neal, John**.—(1793-1876.) An American novelist, poet, journalist, and miscellaneous writer.
- Nebraska**.—One of the Western States of the U. S. Bounded on the north by S. D., east by Iowa and Mo., south by Kan. and Col., west by Col. and Wyo. It was part of the Louisiana Purchase and of Mo. Ter. Neb. Ter. was formed in 1854 and then included portions of the present Col., Wyo., Mont., and the two Dakotas; admitted as a state, with its present boundaries in 1867. The surface is undulating and the soil fertile; it is devoted almost wholly to agriculture and grazing; is one of the leading states in the production of corn. Lincoln is the capital and Omaha the chief commercial city; other principal towns are Beatrice, Hastings, Nebraska City, Plattsmouth, Kearney, South Omaha, and Grand Island. It has 90 counties; area, 77,510 sq. miles; pop. (1900), 1,068,539; called the Black-water State, because of the color imparted to the water of the streams by the rich soil through which they flow.
- Nebraska City**.—The capital of Otoe Co., Neb. Pop. (1900), 7,380.
- Nebuchadnezzar**, 10, 182, 184.
- Nebulæ**, 5, 139.
- Nebular hypothesis**, 5, 423.
- Necho**, 10, 180, 184.
- Neck**, Exercises for the, 6, 22.
- Necker, Jacques**.—(1732-1804.) French financier, statesman, and author referred to, 10, 342.
- Necker, Madame**, 10, 342.
- Needham**.—A town in Norfolk Co., Mass. Pop. (1900), 4,016.
- Negaunee**.—A city in Michigan, the center of an iron mining district. Pop. (1900), 6,935.
- Negley, James Scott**.—Born, 1826. At the outbreak of the Civil War he entered the Union army as colonel of the 48th Pa. vols. He was soon promoted to brig.-gen., and in 1862 to maj.-gen.
- Negotiable paper**, 13, 126.
- Negro Plot**, 11, 61.
 Troops, 12, 344.
- Negroes, Free**, 11, 373.
- Nehemiah**, 10, 184.
- Neilson, Adelaide**.—(1848-1880.) Celebrated English actress.
- Nelson amendment**, 12, 180.
- Nelson, Horatio**, 10, 352; 14, 357.
- Nelson, Samuel**, 12, 344.
- Nelson, Thomas**, 11, 122.
- Nelson, William**, 12, 97.
- Nemesis**.—In Greek mythology, a goddess personifying the divine distribution to every man of his precise share of good or adverse fortune.
- Nepos, Cornelius**.—Lived in the 1st century B. C.; born at Verona, Italy. A Roman historian.
- Neptune**, 10, 98.
- Neptune**, 5, 130.
- Nereids**.—In Greek mythology, sea nymphs, daughters of Nereus and Doris.
- Nerium oleander**, 5, 70.
- Nero**.—(37 A. D.-68 A. D.) Roman emperor 54-68. In the latter years of his reign he became a cruel despot; took his own life, when overthrown by a revolt under Galba, 10, 227.
- Nerva**, 10, 227.
- Nerves**, 1, 283.
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 Structure of, 1, 286.
 Tissue of, 1, 286.
- Nervous children**, 2, 98.
 System, 1, 283; 2, 96.
 Sympathetic, 1, 284.
- Nessler, Victor**.—(1841-1890.) German composer and conductor.
- Nessus**, 10, 107.
- Nestor**.—In Greek legend, a king of Pylus, famous as the oldest councilor of the Greeks before Troy.
- Nests of birds**, 4, 113.
 American herring gull, 4, 116.
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 Pinnated grouse, 4, 116.
 Piping plover, 4, 119.
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 Ruffed grouse, 4, 116.
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 Whip-poor-will, 4, 121.
 Whooping crane, 4, 114.
 Wild pigeon, 4, 119.
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Gain, 13, 40.

Loss, 13, 40.

Netherlands.—A kingdom of western Europe, often called Holland, after North Holland and South Holland, two of the 11 provinces into which the kingdom is divided. It is bounded on the north and west by the North Sea, east by Prussia, and south by Belgium. The government is a hereditary constitutional monarchy, administered by a king and a states-general, composed of an upper and lower chamber. The prevailing religions are Dutch Reformed and Roman Catholic. It has an area of only 12,648 sq. miles, upon which live a population of 5,004,204. The colonial population of the Netherlands, however, approximates 33,000,000, living on possessions aggregating 833,000 sq. miles.

History of, 10, 299.

Nettle, 5, 69.

Symbolism of, 1, 199.

Neuchâtel.—A canton of Switzerland, noted for its manufacture of watches and lace. Pop., over 100,000.

Neutral Ground, 11, 122.

Neutrality, Armed, 11, 215.

Proclamation of, 12, 345.

Neva.—A river of northern Russia rising in Lake Ladoga flowing into the Gulf of Finland. Length, 40 miles.

Nevada.—One of the Western States of the U. S. of America. Bounded on the north by Ore and Id., east by Utah and Ariz., south and west by Cal. Part of the territory was acquired by the war with Mex., the first permanent settlements were made from 1848 to 1850; Nev. Ter. was organized in 1861 and was admitted as a state in 1864. Silver was discovered in 1859, and the mining of that metal was the chief factor in the development of the state. The famous Comstock Lode was the richest yet found in the country, yielding, before it was exhausted, more than a hundred millions of dollars. Gold and other metals are also found in considerable quantities. The state is not suited to agriculture, though there are some fertile valleys which are chiefly devoted to stock-raising and wool-growing. The capital is Carson City; there are no other towns of importance; the entire population of the state is less than that of the small city of Utica, N. Y. It has 14 counties; area, 110,700 sq. miles; pop. (1900), 42,335; called the Silver State.

Nevada City.—The capital of Nevada Co., Cal. It exports gold. Pop. (1900), 4,888.

Nevada Fall.—A cataract in the Merced River, Yosemite Valley, Cal. Height about 600 feet.

New Albany.—The capital of Floyd Co., Ind. It has the largest glass works in the U. S. Pop. (1900), 20,628.

New Albion.—The name given by Drake to that part of the Pacific coast now included in northern Cal., Ore., and the region northward.

New Almaden.—A village in Cal., noted for its quicksilver mines.

New Amsterdam.—The name of the Dutch colony founded in 1814 on the site of present city of New York, 11, 47.

Newark.—(1) The capital of Essex Co., N. J., on the Passaic River. It is the largest city in the state, an important railway and trade center and has numerous manufactures. Pop. (1900), 246,070. (2) The capital of Licking Co., Ohio. Pop. (1900), 18,157.

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- New Beacon.**—The highest point of the Highlands of the Hudson, in Dutchess Co., N. Y. Height, 1,685 feet.
- New Bedford.**—One of the capitals of Bristol Co., Mass., it has manufactures of cotton goods. Pop. (1900), 62,442.
- Newbern (N. C.), Battle of.** 12, 97.
- New Berne.**—The capital of Craven Co., N. C. It has an extensive coast trade in naval stores. Pop. (1900), 9,090.
- Newberry, John Strong.**—(1822–1892.) A noted American geologist.
- Newborn Baby,** 2, 26.
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 Waking a baby up, 2, 38.
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- New Brighton.**—(1) A village on the northern side of Staten Island. (2) A borough in Beaver Co., Pa. Pop. (1900), 6,820.
- New Britain.**—A city in Hartford Co., Conn., engaged largely in the manufacture of builders' hardware. Pop. (1900), 25,998.
- New Brunswick.**—A maritime province of the Dominion of Canada, lying east of the state of Maine, and south and west of the river and gulf of St. Lawrence. Nova Scotia lies to the east of it, being connected with it by a narrow isthmus. Its chief industries are fisheries and lumbering. Area, 28,100 sq. miles; pop. about 320,000.
- New Brunswick.**—The capital of Middlesex Co., N. J.; the seat of Rutgers College, and of a Dutch Reformed theological seminary. It has manufacturing interests. Pop. (1900), 20,006.
- Newburg.**—The capital of Orange Co., N. Y. It has manufactures and river trade; shipping port for coal. Pop. (1900), 24,943.
- Newburg Addresses,** 11, 122.
- Newburyport.**—One of the capitals of Essex Co., Mass., on the Merrimac River. Ship-building and manufacturing interests. Pop. (1900), 14,478.
- Newcastle.**—The capital of Lawrence Co., Pa.; manufactures and mines. Pop. (1900), 28,339.
- Newcastle.**—A seaport and the chief town of Northumberlandshire, England; situated on the Tyne; the largest coal market in the world. Pop., about 200,000.
- Newcomb, Prof. Simon,** 8, 69.
- Newell, Robert H.**—(1836–1901.) A well-known journalist and writer. Known best by the "Orpheus C. Kerr Papers," published during the Civil War.
- New England.**—A collective name for the northeastern section of the U. S., comprising the state of Me., N. H., Vt., Mass., Conn., and R. I.
 Anti-slavery Society, 12, 2.
 Confederation, 11, 62.
 Council for, 11, 62.
 Emigrant Company, 11, 393.
 Primer, 11, 62.
- New England Shilling.**—A rude coin minted in Boston from the year 1652, bearing the denomination mark "XII," signifying 12d., and valued at about 18¼ cents.
- Newfoundland.**—An island belonging to Great Britain, situated east of the Dominion of Canada. Capital, St. John's. Area, 42,200; pop., about 200,000.
 dog, 4, 18.
 explored by Cartier, 11, 39.
- New France,** 11, 62.
- New Granada.**—An ancient name of the South American country now known as Colombia.
- New Guinea, or Papua.**—The largest island in the world; it lies north of Australia, from which it is separated by Torres Strait. Area, 313,000; pop., about 800,000.

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New Hampshire.—One of the New England States and one of the thirteen original states of the American Union. Bounded on the north and west by the province of Quebec, Canada; east by Maine, and the Atlantic; south by Massachusetts and Vermont. Capital, Concord; largest town, Manchester. It is one of the leading manufacturing states, and noted especially for its cotton and woolen productions. Pop. (1900), 411,588.

a royal colony, 11, 47.

New Haven.—(1) A Puritan colony in New England, established in 1638, and united with Conn. in 1662. (2) The capital of New Haven Co., Conn., on New Haven Harbor, near Long Island Sound. It is the largest city in the state, has manufactures of carriages, Winchester arms, etc., and is the seat of Yale University. Pop. (1900), 108,027.

New Haven and Connecticut colonies united by charter, 11, 46.

Colony founded, 11, 46.

New Hope Church (Ga.), **Battle of**, 12, 97.

New Ireland.—In the Pacific Ocean, an island of the Bismarck Archipelago. A German possession since 1884. Length, about 300 miles.

New Jersey.—One of the thirteen original states and one of the North Atlantic States of the American Union. Bounded on the east by New York and the Atlantic, north by New York, south by Delaware Bay, and west by Pennsylvania and Delaware. First settled by the Dutch, at Bergen, about 1617. One of the leading manufacturing states of the Union, especially in zinc, glass, and silk. Capital, Trenton; principal cities, Newark and Jersey City. Pop. (1900), 1,883,669.

New Jerseymen Foreigners.—A derisive name given to the people of New Jersey in allusion to the fact that the legislature, by a special act, permitted Joseph Bonaparte to acquire real estate and live in princely magnificence in New Jersey after he had been refused by Pennsylvania.

New Jersey Plan, 11, 250.

New Lebanon.—A town of Columbia Co., N. Y. Here is situated the village of Mount Lebanon, containing the Shaker community, and the village of Lebanon Springs, noted for hot springs. Pop. (1900), 1,556.

New London.—One of the capitals of New London Co., Conn.; fishing industries. Pop. (1900), 17,548.

New London (Conn.), **Capture of**, 11, 123.

New Madrid (Mo.), **Battle of**, 12, 97.

Newman, John Henry.—(1801-1890.) An English Roman Catholic prelate and author.

Newman, William H., 13, 73.

New Mexico.—A territory in the southwestern part of the U. S. of America, lying between Texas on the east and Arizona on the west. It was settled by the Spanish missionaries in the 16th century, conquered by the Americans in 1846, ceded by Mexico to the U. S. in 1848, organized as a territory in 1850, and enlarged by the "Gadsden Purchase" in 1853. The inhabitants are largely of Mexican descent. The country is mountainous and abounds in mineral wealth. The principal occupations are mining and rearing live stock. The capital is Santa Fé. Area, 122,580 sq. miles; pop. (1900), 195,310.

New Netherlands.—The second in order of settlement of the thirteen colonies; the region lying between the Delaware and Connecticut rivers.

New Orleans.—The largest city of La., the chief seaport of the Mississippi Valley, and the largest cotton market in the U. S. It has a large export trade. Pop. (1900), 287,104. It boasts the largest customhouse in this or any other land. It was begun in 1848 and over thirty years elapsed before it was ready for use. It is built of Quincy granite and the interior is finished in finest marble. It has 111 rooms. The height from the pavement to the top of the cornice is eighty feet, and to the top of the light on the dome, one hundred and eighty-seven feet. The dome itself is forty-nine feet square and sixty-one feet high. The estimated total cost of building, \$4,900,000.

Battle of, 11, 250.

Capture of, 12, 98.

Newport.—(1) The capital of Campbell Co., Ky. Manufacturing interests. Pop. (1900), 28,301. (2) One of the capitals of the state of R. I., situated on the island of R. I. in Narragansett Bay; a fashionable summer resort. Pop. (1900), 22,034.

Newport News.—A point of land on the north side of Hampton Roads, Va., a few miles from Norfolk.

New Rochelle.—A city in Westchester Co., N. Y., situated on Long Island Sound a few miles from New York City. Pop. (1900), 14,720.

New South Wales.—A British colony in Australia; capital, Sydney. Stock raising and mining are the chief industries. Area, 310,700 sq. miles; pop., over 1,000,000.

Newspaper.—The first newspaper advertisement was in 1652.

Advertising, 8, 472.

an educator, 8, 87.

Art department of a, 8, 470.

Associated press, 8, 470.

Business management of a, 8, 464.

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- Circulation, 8, 472.
- Editorial Staff, 8, 466.
- Evening, 8, 469.
- Office for girls, 7, 338.
- Reporting, 8, 474.
- Special Correspondent, 8, 484.
- Sunday, 8, 470.
- Washington Correspondent, 8, 482.
- Woman reporter, 8, 486.
- Yellow journalism, 8, 472.

NEWSPAPERS, FIRST.—

In ancient Rome, an official gazette, called "Acta Diurna," was issued under the management and authority of the government, and was posted up daily in some prominent place in the city.

In Venice a paper of public intelligence, called "Gazette," was published in 1620.

In England, the first weekly newspaper was published by Nathaniel Butler in 1622.

In England, the first daily newspaper in 1707.

In France, the first weekly newspaper was published in 1631.

In France, the first daily, 1777.

In America, at Boston, a newspaper was published in 1690.

In Ireland, the first newspaper, called "Pue's Occurrence," appeared in 1700.

In Ireland, the oldest Dublin newspaper, "The Freeman's Journal," in 1755.

In Germany, the first newspaper was published in 1715.

In Holland, the first newspaper was published in 1732.

In Turkey, the first newspaper was published in 1795.

In Australia, the first newspaper was published in 1803.

The first English newspaper was the "English Mercury," begun in the reign of Queen Elizabeth, and was issued in the shape of a pamphlet. The "Gazette" of Venice was the original model of the modern newspaper.

The oldest newspaper in the world is said to be the British "Press," which was first issued in 1662. Three years later the "London Gazette" appeared, being published at Oxford on account of the plague in London.

New Style, 13, 95.

New Sweden.—A Swedish colony in Del. Founded in 1638, conquered by the Dutch in 1655, 11, 47.

Newton.—A city in Middlesex Co., Mass. Pop. (1900), 33,587.

Newton, John, 12, 98.

Newton, Sir Isaac.—(1642-1727.) Famous English natural philosopher and mathematician. Discoverer of the law of gravitation.

referred to, 8, 264; 14, 13, 23, 275.

New York (Greater New York).—The name of the metropolis of the U. S., situated in the southeastern part of New York state. On Jan. 1, 1898, the territory of New York City proper was enlarged so as to include many neighboring cities and towns: Brooklyn, Staten Island, etc. The city as thus enlarged is next to London, the largest in the world. It is also the chief commercial center and most important port in the Western Hemisphere. Pop. (1902), estimated, 3,582,930. Its net public debt in 1902 was \$364,270,868, and the assessed valuation of all taxable property was \$3,787,970,873. The pop. of Greater New York and environs (Yonkers, Newark, Jersey City, etc.), over 4,500,000. Area, 308 sq. miles.

"**New York**" *The*, 12, 345.

New York Bay.—The bay at the mouth of the Hudson, on which New York City is situated.

New York Public Library.—A library formed by consolidating the Astor, Lenox, and Tilden libraries in May, 1895.

New Zealand.—In the Pacific Ocean, southeast of Australia, a group of islands belonging to Great Britain. The inhabitants are engaged principally in agriculture and gold mining. Pop. (1893), about 672,265.

New Zealand Fairy Tales, 3, 38.

Ney, Michel, Duc d'Elchingen, Prince de la Moskowa.—(1769-1815.) A celebrated French marshal.

put to death, 10, 371.

referred to, 8, 13; 14, 7, 84, 96.

Nez Percé Indians.—A warlike tribe of Indians of the Shahaptian stock, that lived chiefly along the shores of the Columbia and Snake rivers when discovered by Lewis and Clark in 1804. They are now on the reservation in Id., and number about 1,500.

Niagara.—A city in Niagara Co., N. Y. It contains the villages of Niagara Falls and Suspension Bridge. Pop. (1900), 19,457.

"**Niagara**," *The*, 11, 250.

Niagara Falls.—Situated in the Niagara River; the largest cataract in the world. It is divided into the American Fall, 164 feet high, and the Horseshoe or Canadian Fall, 150 feet high.

Waterpower of, 5, 261.

Niagara River.—A river that flows from Lake Erie northward into Lake Ontario. It separates New York from the province of Ontario, Canada. Length, 32 miles.

Nibelungenlied, 3, 413.

Kriemhilda's Dream, 3, 414.

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Nibelungenlied — *Continued.*

- Sigfried's Career Begins, 3, 415.
- How Sigfried Came to Worms, 3, 415.
- How Günther Won Brunhilda, 3, 418.
- A Consummation, 3, 419.
- A Woman's War, 3, 420.
- Treachery Triumphant, 3, 422.
- Kriemhilda's Sorrow, 3, 424.
- Kriemhilda Remarries and Plans Revenge, 3, 424.
- Kriemhilda's Revenge, 3, 426.

Niblo's Garden.—A famous old Broadway theater in New York City; opened in 1828; in 1829 a concert saloon. As Niblo's Garden and Theater it was opened in 1839, burned in 1846 and in 1872, and reopened in 1872. Taken down in 1895.

Nicaea taken by Crusaders, 10, 258.

Nicander, Karl August.—(1799-1839.) A noted Swedish poet.

Nicaragua.—One of the five Central American republics. The language is Spanish and the state religion is Roman Catholic. The chief products are coffee, hides, cabinet woods, rubber, fruits, and gold. Area, 40,000 sq. miles. Pop., estimated (1898), about 420,000.

Nicaragua Canal.—A projected ship canal across the isthmus connecting North America and South America. The purpose of the canal is to connect the Atlantic and Pacific oceans so as to avoid the long sail around Cape Horn. The specific advantage of the Nicaragua route is the possibility of utilizing San Juan River and Lake Nicaragua, thereby materially lessening the labor of excavating. The desirability of such a canal has been recognized ever since the time of the Spanish conquests, and the feasibility of the Nicaragua route has been maintained from the middle of the 16th century. Many surveys of the route have been made, the most complete being those of the U. S. government in 1872-73, and in 1885. Congress in 1899 authorized President McKinley to secure the necessary concessions or the confirmation of concessions previously granted, for the prosecution of the work. All preliminary work has been satisfactorily accomplished. But other proposed routes, particularly that by way of Panama, have their ardent champions, and the final choice of route was in favor of Panama.

Nice.—In France, a seaport and the capital of the department of Alpes-Maritimes. A famous health resort; chief industries, the manufacture of perfumes and oils. Pop. (1891), about 89,000.

Nicholas I.—(1796-1855.) Czar of Russia, 14, 124.

Nicholas I., "The Great."—Pope of Rome (858-867).

Nicholas II.—Pope of Rome (1058-1061), 10, 260.

Nicholas III.—Of the house of Orsini. Pope of Rome (1277-1280).

Nicholas IV.—Pope of Rome (1288-1292).

Nicholas V.—Pope of Rome (1446-1455).

Nicholson, James William Augustus.—(1821-1887.) A noted American admiral who served with distinction during the Civil War.

Nicias, 10, 200.

Nickel.—A metallic element (Ni) used extensively in plating, where it is applied in the form of a double sulphate of nickel and ammonia. United in varying proportions with copper and zinc it forms "German Silver" 5, 221.

Nicolai, Otto.—(1810-1849.) A noted German composer and conductor.

Nicolay, John George.—Born in Germany, 1832. Author; private secretary of Abraham Lincoln (1860-65). Collaborated with John Hay in writing the "Life of Abraham Lincoln" and in editing the "Complete Works of Abraham Lincoln."

Nicotiana tabacum, 5, 77.

Nicotine, 5, 249.

Niel, Adolphe.—(1802-1869.) A famous French marshal, especially distinguished in the Crimean War.

Nieman.—A river of West Russia, and the province of East Prussia. Length, about 500 miles.

Nifflheim, 10, 118.

Niger.—A great river of Africa, flowing into the Gulf of Guinea. Length, about 2,600.

Nighthawk, 4, 140.

Eggs of the, 4, 116.

Nest of the, 4, 116.

Nightingale, 4, 174.

Eggs of the, 4, 118.

Nest of the, 4, 118.

Song of the, 4, 175.

Virginia, 4, 187.

Nightingale, Florence, 14, 369.

Nightshade.—The common name of the genus of plants known to botanists under the name of *Solanum*. The flowers strongly resemble those of the potato. It also passes under the names of bittersweet and Dulcamara, because the taste is at first sweet and then bitter. It has medicinal uses especially as an antiscorbutic remedy. There is another plant, the Deadly Nightshade, the *Atropa Belladonna*, with which this is often confounded. The latter is highly poisonous and yields atropin, 5, 69.

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- Nihilists.**— The followers of nihilism. Nihilism is an organized secret effort of a party of so-called reformers to overturn or revolutionize the established order of things, in Russia particularly, both social and political.
- Nijni-Novgorod.**— In central Russia, the capital of the government of Nijni-Novgorod. Noted for its great annual fairs; also an important trade center. Pop. (1900), 90,053.
- Nike.**— In Greek mythology the goddess of victory; called by the Romans Victoria.
- Nike Apteros, or Wingless Victory, Temple of.**— A famous Ionic temple of Athens.
- Nile.**— The longest river in Africa and one of the longest rivers in the world. It flows in a northerly direction for 3,400 miles and empties into the Mediterranean Sea near Suez. It is divided into two branches, the White Nile and the Blue Nile. The main source of the river is the Victoria Nyanza, a very large lake lying under the equator. The Blue Nile rises in the highlands of Abyssinia and the two join at Khartoum. The fertility of Egypt is confined to a narrow strip along the banks of the Nile, which is overflowed by the river during the rainy season, and a deposit of alluvial matter renders the land productive. The crops are watered by an antiquated system of irrigation. A peculiar formation is the Delta of the Nile, — a large, triangular tract, so-named from its resemblance to the Greek letter delta. The height to which the river rises is a matter of so much concern to the people that they have placed graduated stone pillars along its course to measure the rise. These pillars are called Nilometers, 10, 178.
 Battle of the, 10, 352.
 God of the, 10, 74.
- Niles, Hezekiah.**— (1777-1839.) A journalist, founder of the weekly journal "Niles' Register."
- Nilsson, Christine.**— Born, 1843. A famous Swedish soprano singer, who first appeared before the public in 1860, and who retired from the stage in 1888.
- Nimeguen, Peace of,** 10, 319.
- Nimes.**— In France, the capital of the department of Gard; noted for its manufactures of silks, and also as a trade center. It has much historical interest, having been conquered by the Romans in 121 B. C.
- Nimrod,** 10, 181.
- Nineteenth Century, Economic progress of,** 13, 330.
- Ninety-Six,** 11, 123.
- Nineveh.**— In ancient geography, the capital and one of the principal cities of the Assyrian Empire. Excavations upon the site of Nineveh have led to the discovery of many valuable antiquities, 10, 182.
- Niobe.**— In Greek mythology, wife of Amphion, king of Thebes. For boasting of her children, the latter were killed by the arrows of the light-deities, 10, 93.
- Nipissing, Lake.**— In the province of Ontario, Canada, a lake having its outlet in Georgian Bay (an arm of Lake Huron). Length, about 50 miles.
- Nipmuc Indians.**— A general name for the Indians of several tribes inhabiting, in early colonial days, central Mass. and extending into Conn. and R. I. The majority of the Nipmucs did not at first join Philip in his war against the colonists, but were active against the English during the struggle in Conn. in 1675. In Jan., 1676, the remnant of King Philip's tribe with the Narragansett, the Quaboag, and the River Indians, joined the Nipmucs, and on the defeat of Philip fled north and west. The word Nipmuc means "fresh-water fishing place."
- Nisan,** 13, 102.
- Nisses,** 10, 120.
- Nitric Acid,** 5, 174.
 Anhydride, 5, 175.
 Oxide, 5, 175.
- Nitrobenzene,** 5, 243.
- Nitrocellulose,** 5, 204.
- Nitrogen group of chemical elements,** 5, 193.
 Compounds of, 5, 173.
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 Oxides of, 5, 175.
 peroxide, 5, 175.
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 trioxide, 5, 175.
- Nitroglycerin,** 5, 175, 204.
 Manufacture of, 5, 204.
- Nitrous oxide, or laughing gas,** 5, 175.
- Nivose,** 13, 97.
- Njord,** 10, 127.
- Noah, Hud, and Salih** (Arabic legend), 3, 230.
- No Chance,** 8, 13.
- No Man's Land.**— (1) A small island a few miles from Martha's Vineyard, Mass. (2) A district ceded by Texas to the U. S. in 1850, and now constituting Beaver Co., in Oklahoma.
- Nomenclature, Chemical,** 5, 173.
- Nominations,** 12, 345.
- Nones,** 13, 91.
- Non-Importation Agreement,** 11, 123.
- Non-Intercourse Act,** 11, 250.
- Nonpareil,** 4, 190.
- Nordau, Max Simon.**— An author and physician, born in Buda-Pesth in 1849, and removed

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- thence to Paris. His works have been translated into English and are widely read, 14, 383.
- Nordica, Madame Lillian.**—Born, 1858. A famous soprano singer.
- No-rent Manifesto,** 10, 382.
- Norfolk.**—A seaport in Norfolk Co., Va., one of the largest cities in the state, and a naval station; an important center of trade and the terminus of several steamer lines. Pop. (1900), 46,624.
- Norfolk (Va.), Burning of,** 11, 123.
Evacuation and recapture of, 12, 98.
Spaniel dog, 4, 21.
turkey, 4, 108.
- Normans.**—The sea-rovers from Norseland who settled in France and founded the district of Normandy, under Rolf or Rollo the Ganger in 912.
Conquest of England by the, 10, 249.
Influence on English language, 8, 362.
- Norman's Woe.**—A dangerous reef near the entrance to Gloucester Harbor, Mass.
- Norns, or Fates,** 10, 121.
- Norris, Professor,** on dog-training, 1, 147.
- Norris, William Edward.**—Born, 1847. A popular English novelist.
- Norristown.**—The capital of Montgomery Co., Pa., manufacturing interests. Pop. (1900), 22,265.
- Norse divinities,** 10, 119.
Element in the English language, 8, 363.
fairy tales, 3, 134.
Mythology, 10, 113.
version of the Creation, 10, 118.
- North Adams.**—A town in Berkshire Co., Mass.; cotton, wool, and leather manufactures. Pop. (1900), 24,200.
- North American Indian fairy tales,** 3, 157.
- Northampton.**—(1) A town in Hampshire Co., Mass., on the Connecticut River, 17 miles from Springfield. Pop., 18,643. (2) The capital city of the English county of the same name, noted for its antiquity. Pop., 61,016.
Battle of, 10, 274.
- North Anna.**—A small stream in northern Va., famous for the battle between the forces of Gen. Grant and Gen. Lee, May 23, 1864, the result of which was not decisive.
- North Carolina.**—One of the thirteen original states of the American Union. It lies on the Atlantic coast, immediately south of Virginia. The surface is low and flat in the eastern, hilly or of the nature of a plateau in the central, and mountainous in the western part. It is an agricultural state, the chief products being corn, cotton, tobacco, and rice. It was first settled about 1660, and became a royal province in 1729. The "Mecklenburg Declaration of Independence" was passed in 1775, thus anticipating by a year the declaration made by the Continental Congress in Philadelphia. The state adopted the U. S. Constitution in 1789, seceded May 20, 1861, and was readmitted to the Union in July, 1868. Area, 52,250 sq. miles; pop. (1900), 1,893,810. Called the Old North State, the Turpentine State, and the Tar-heel State.
- North, Christopher.**—The pseudonym of John Wilson, an eminent Scottish contributor to Blackwood's Magazine.
- North Conway.**—A summer resort in Carroll Co., N. H.
- Northcote, Sir Stafford Henry.**—(1818-1887.) An English statesman and leader of the Conservative party in Parliament, in which position he succeeded Earl Beaconsfield.
- North Dakota.**—One of the North Central States of the U. S. of America, bounded by Canada, Minn., S. D., and Mont. Its capital is Bismarck. The land is almost entirely prairie, the surface, with the exception of the so-called "bad lands," being largely flat. It produces a high grade of wheat in enormous quantities. It was admitted to the Union in 1889. Area, 70,795 sq. miles; pop. (1900), 319,146.
- Northeastern boundary,** 11, 394.
- Northern diver,** 4, 219.
hare, 4, 43.
Pacific railroad, 12, 348.
shrike, 4, 146.
Virginia, Army of, 12, 99.
- North, Frederick, Lord,** 11, 123.
- North German Confederation,** 10, 379.
- North Park.**—A plateau in northern Col. Area, about 2,000 sq. miles. Elevation, about 8,500 ft.
- North Point (Md.), Battle of,** 11, 250.
- North Sea.**—That portion of the Atlantic Ocean which lies between the British Isles and the Continent. Its navigation is extremely perilous on account of sand-banks and fog.
- Northumberland.**—The most northerly county of England.
- Northwestern Boundary,** 11, 394.
- Northwest Territory.**—Under this name was included the country which now forms the states, Ohio, Indiana, Illinois, Wisconsin, and Michigan. The thirteen original states each claimed this territory but eventually their claims were relinquished.
- Norton, Charles Eliot.**—Born, 1827. A noted American author; professor of the history of art at Harvard University.

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- Norton, Mrs.** (HON. CAROLINE ELIZABETH SARAH).—(1808-1877.) An English poet and novelist. She was the granddaughter of Richard Brinsley Sheridan.
- Norwalk.**—(1) A township in Fairfield Co., Conn.; has manufacturing interests. Pop. (1900), 19,932. (2) The capital of Huron Co., Ohio. Pop. (1900), 7,074.
- Norway.**—A kingdom of northwestern Europe, and forming the western part of the large Scandinavian Peninsula. Up to October 26, 1905, Norway was united with Sweden under one king. Then the union was repealed and the crown offered to Carl, son of the king of Denmark. He ascended the throne under the title of Haakon VII. It is a constitutional and hereditary monarchy. The chief industries are fisheries and lumber, and the mining of silver, copper, iron, and nickel. The country is mountainous, and large fjords indent the coast. The state church is Lutheran. Area, 124,445 sq. miles; pop., (1900), 2,240,032.
- Norway Maple, The, 4, 407.**
- Norwich.**—(1) One of the capitals of New London Co., Conn. Paper, cotton, wool, and metal manufactures. Pop. (1900), 24,637. (2) The capital of Chenango Co., N. Y., on the Chenango River. Pop. (1900), 5,766.
- Norwich.**—(1) The capital of Norfolk, England; engaged largely in manufacturing. Pop. (1891), about 100,000. (2) A city of Connecticut; an important trade and manufacturing center. Pop. (1900), 17,251.
- Nose, 1, 294.**
 Membrane of, 1, 294.
 Nostrils, 1, 294.
- North, Crawford.**—A deep and narrow valley of the White Mountains, N. H.
- Note, Form of promissory, 7, 451.**
 Promissory, 7, 450; 13, 50.
- Notes, Endorsing accommodation, 7, 449.**
 Renewing, 13, 30.
 Treasury, 13, 165.
- Notre Dame.**—One of the world's most famous cathedrals. It is situated at Paris, was begun in 1163.
- Nott, Eliphalet.**—(1773-1866.) A noted American educator.
- Nottingham.**—An important city of England and the capital of the county of the same name. It is most noted for lace and hosiery manufacture. Pop., (1905), 251,671.
 Battle of, 10, 274.
 Lace curtains, 1, 35.
- Noun, 8, 388.**
- "Nova Constellatio" Coinage, 13, 165.**
- Novanglus.**—A pseudonym used by John Adams (1774-75), in a political newspaper controversy with a Tory antagonist. (See ADAMS, JOHN, 11, 187)
- Nova Scotia.**—A province of the Dominion of Canada, on the extreme southeast of Canada; is peninsular in form, being connected with the province of New Brunswick by the Isthmus of Chignecto and separated from it by the Bay of Fundy. The large island of Cape Breton belongs to this province. The capital is Halifax. The area is 20,550 sq. miles and the population, 450,523.
- Novel, The, 8, 518.**
- November** (Latin, *novem*, nine).—In ancient times it was the ninth month; but became the eleventh, as now, upon the addition in 713 B. C., of January and February, 13, 103.
- Nubia.**—A division of eastern Africa, in the district of the Sudan. The chief town in Dongola. On the revolt of the Mahdi in 1882 it passed out of the hands of the Egyptians and is now under British control.
- Nullification, 11, 394.**
- Numbers, Divisibility of, 13, 16.**
- Nuñez de Balboa, Vasco, 11, 37.**
- Nurse, Duties of a, 7, 327.**
- Nurse, Housekeeper as a, 1, 103.**
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- Nurse-girl, Choosing a, 1, 135.**
- Nursery, 2, 38.**
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- Nursery and Infant Dietetics, 2, 38.**
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 Fireplace, 2, 40.
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- Gertrude garments, 2, 40.
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- Nurse, The wet, 2, 46.
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- Physician and the Nurse, 1, 311.
- Preparing a bed, 1, 303.
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- Thermometer, 1, 317.
- To change sheets, 1, 303.
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- Use of screens, 1, 307.
- Ventilating the sick room, 1, 306.

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Nuts, Pecan, 4, 425.

Nye, Edgar Wilson.— (1850–1896.) A journalist and humorist, known as "Bill Nye."

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- a decorative wood, 1, 37.
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- Black Jack, 4, 464.
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- Chestnut, 4, 464.
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- Iron, 4, 464.
- Laurel, 4, 463.
- Mistaken ideas of durability of, 4, 460.
- Mossycup, 4, 465.
- "openings," 4, 465.
- Overcup white, 4, 465.
- Pin, 4, 465.
- Post, 4, 464.
- Red, 4, 461.
- Round-leaved white, 4, 464.
- Scarlet, 4, 462.
- Shingle, 4, 463.
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- Western red, 4, 461.
- White, 4, 461.
- Willow, 4, 463.
- Yellow, 4, 464.

Oak and the Reed, French fable, 3, 188.

Oakes, James.— (1825–.) An American soldier who served with distinction through the Mexican War.

Oakland.— The capital of Alameda Co., Cal.
 Pop. (1900), 66,960.

Oakman, William S., on "Early Marriage," 1, 235.

Oaks, The.— A horse-race run annually at Epsom, England, for three-year-old fillies. It takes place on the Friday following Derby Day—last Wednesday of May. Distance, 1½ miles.

Oates Plot.— Devised by Titus Oates, an English impostor. In 1678 he submitted to Charles II. and afterward to Parliament, forged documents of a conspiracy formed by Don John of Austria and Pere la Chaise, Louis XIV.'s confessor, for the murder of Charles II. and the establishment of Roman Catholicism in England. A number of per-

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- sons were executed on his evidence and he was granted a pension, 10, 326.
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- Oats**, 5, 87.
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 Emerson quoted on, 2, 208.
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 Time to begin to teach, 2, 457.
 to laws, not to persons, 2, 208.
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- Obelisk**.— Derived from the Greek *ὀβελος*, signifying a spit. Applied to prismatic monuments of stone terminating in a pointed top.
 OBELISK OF LUXOR; in the Place de la Concorde, Paris; brought from Egypt under Louis Philippe.
 OBELISK OF THE LATERAN; in Rome, brought from Heliopolis by Constantius.
 OBELISK OF THEODOSIUS; in the Hippodrome at Constantinople, brought from Heliopolis and erected 390 A. D.
 OBELISK OF THE VATICAN; at St. Peter's, Rome, brought from Heliopolis by Caligula.
- Ober-Ammergau**.— A village in upper Bavaria, noted for the miracle-play acted there every ten years.
- Oberlin**.— A village in Lorain Co., Ohio, the seat of Oberlin College. Pop. (1900), 4,082.
- Oberlin College**, Cost of attending, 8, 48.
- Oberon**.— In Shakespeare's "Midsummer's Night's Dream," the King of the Fairies; husband of Titania.
- Obey**, Unwillingness to, 2, 200.
- Obi**.— The chief river of Siberia, formed by the union of the Biga and Katun, and flowing into the Gulf of Obi. Length, 2,600 miles.
- Obion River**.— A river of western Tenn. Length, about 135 miles.
- Obliquus externus abdominis muscle**, 1, 275.
- O'Brien, Fitz-James**.— (1828-1862.) An Irish-American writer of stories.
- O'Brien, Miles M.**, on "The Drummer Who Succeeds," 13, 347.
- O'Brien, William Smith**.— (1803-1864.) An Irish Revolutionist and member of Parliament.
- Observation**, 2, 157.
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- Observation — Continued.**
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- Obstacles, Overcoming**, 14, 156.
- Obtuse angle**, 7, 250.
- Ocala Platform**, 12, 346.
- O'Callaghan, Edmund Bailey**.— (1797-1880.) An Irish-American historian.
- Occipital bone**, 1, 272.
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- Occipito-frontalis muscle**, 1, 274.
- Occupations, Children's**, 2, 416.
- Occupations, Kindergarten**, 7, 26.
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 Coöperation with Butchers and Green-grocers, 7, 424.
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 Chemistry, 7, 431.
 Artificial Flower Making, 7, 432.

Ocean Grove.—A town and seaside in Monmouth Co., N. J.

Oceania, or Oceanica.—The fifth division of the globe, comprising all the islands situated between the southeast coast of Asia and the west coast of America.

Oceans.—The body of water that covers about three-fifths of the surface of the earth is arbitrarily divided into oceans, the chief of which are five in number.

1. **ANTARCTIC.**—That part of the ocean that lies south of the Antarctic circle. It is largely unexplored. It includes some land but no traces of animal or vegetable life have been discovered.

2. **ARCTIC.**—That part of the ocean that lies about the north pole. It has been largely explored by expeditions that have endeavored to reach the north pole. This ocean is practically bounded by the northern shores of Europe, Asia, and North America. Its largest body of land, so far as is known, is Greenland.

3. **ATLANTIC.**—That part of the ocean that lies between Europe and Africa on the east, and North and South America on the west, and is bounded by the Arctic and Antarctic oceans on the north and south. Its length is about 10,000 m., its width about 3,000 m., and it is a highway of commerce. A prominent physical feature is the current known as the Gulf Stream.

4. **INDIAN.**—That part of the ocean that lies south of Asia. It is bounded on the west by Africa, and on the east by Australia and the Malay Archipelago. It contains the important islands of Madagascar and Ceylon, and receives the drainage of the Zambesi in

Africa, and of the Indus, Ganges, Tigris and Euphrates in Asia.

5. **PACIFIC.**—The largest of all the oceans, being that part of the ocean that lies between North and South America on the east, and Asia and Australia on the west. It adjoins the Antarctic Ocean on the south and connects by Bering Strait with the Arctic. The most important islands are the Hawaiian, which lie approximately midway between the two continents.

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Ocelot, 4, 72.

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Fur of, 4, 73.

Geographical range of, 4, 72.

Habits of, 4, 73.

Ochrida, Lake of.—In Albania, Turkey; length, about 18 miles.

Oconee.—A river of central Ga. Length, about 250 miles.

O'Connell, Daniel, 10, 369.

O'Connor, Thomas Power.—(1840–) Irish politician and journalist.

O'Connor, Charles.—(1804–1884.) A noted American lawyer; prosecuting lawyer in the famous "Tweed Ring" cases.

Ocracoke Inlet.—A sea passage in N. C., connecting Pamlico Sound with the Atlantic.

Octagon, 7, 283.

To construct an, 7, 241.

Octahedron, Regular, 7, 255.

Octavia.—(70 B. C.–11 B. C.) The wife of Mark Antony, and sister of the Roman Emperor Augustus.

Octavius, Caius.—(63 B. C.–14 A. D.) The first Roman emperor. The birth of Christ occurred during his reign, 10, 266.

Octavo, 13, 151.

October, 13, 103.

October states, 12, 347.

Octopus, 4, 370.

Oculo-motor nerve, 1, 284.

Odell, Benjamin B. Jr., on "The True Politician," 12, 416.

Odenathus, 10, 400.

Odenburg.—Capital of the county of Odenburg, Hungary. It is a royal free city.

Oder.—One of the principal rivers in Germany; rises in Moravia and forms part of the dividing line between Austria and Prussian Silesia. Length, 500 miles.

Odessa.—An important commercial city and seaport of south Russia, in the Government of Kherson. Pop., (1900), 449,673.

Odin, 10, 121.

Odoacer, 10, 232, 234.

Odyssey, Story of the, 3, 377.

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- Ædipus.**—A prominent character in Greek epic poetry and mythology; king of Thebes.
- Æsophagus**, 1, 276.
- Offa's Dyke.**—An intrenchment built by Offa, king of Mercia, between England and Wales, as a defense against the Welsh. It extends from a point near the mouth of the Wye to the mouth of the Dee.
- Offenbach.**—A city situated on the Main four miles east of Frankfort, in the province of Starkenburg, Hesse.
- Offenbach, Jacques.**—(1819-1880.) French composer of opera bouffe.
- "Offensive Partisanship,"** 12, 232.
- Office-holder, Merit in an**, 12, 425.
- Ogdai**, 10, 156.
- Ogden.**—The capital of Weber Co., Utah; an important railroad junction.
- Ogden, William Butler**, 12, 347.
- Ogdensburg.**—A city in St. Lawrence Co., N. Y.; important trade and manufacturing interests. Pop. (1900), 12,633.
- Ogdensburg (N. Y.), Capture of**, 11, 250.
- Ogeechee.**—A river in southeastern Ga., flowing into the Atlantic Ocean near Savannah. Length, about 200 miles.
- Oglesby, Richard James.**—(1824-1899.) A politician and soldier; general in the Civil War.
- Oglethorpe, James**, 11, 49.
- Oglethorpe, James Edward**, 11, 62.
- Ogoshosama**, 10, 167.
- Ohio.**—One of the North Central States of the U. S. of America, lying south of Lake Erie. It was a part of the Northwest Territory organized in 1797. Admitted to the Union in 1803. Rich in agriculture, coal, and manufactures, it ranks first in the Union in the production of wool and of agricultural machinery. Its capital is Columbus. Area, 41,060 sq. miles. Its pop. (1900) is 4,157,545, giving it the fourth place in the Union. Popularly called the Buckeye State.
- Ohio, Army of the**, 12, 99.
- Ohio Company, The.**—A company of colonists from Va. and Md. that received from the British Government, in 1749, 500,000 acres in the Ohio valley for the purpose of settlement.
- Ohio Idea, The.**—A political plan advocating the use of greenbacks in place of national bank notes, and for the payment of U. S. bonds. The plan was urged especially in Ohio.
- Ohio River.**—Formed by the junction of the Monongahela and Allegheny rivers at Pittsburgh; flows through western Pennsylvania and empties into the Mississippi. Navigable its entire length, 975 miles.
- Ohm**, 5, 420.
- Ohnet, Georges.**—(1792-1872.) French novelist and dramatist.
- Oil, Anise**, 5, 50.
 Basil, 5, 52.
 Bergamot, 5, 53.
 Cottonseed, 5, 57.
 Lavender, 5, 63.
 Lubricating, 5, 228.
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 Origanum, 5, 66.
 Peanut, 5, 70.
 Pyrene, 5, 6.
 Sunflower, 5, 76.
 Thyme, 5, 66.
- Oil-cake**, 5, 57.
- Oil City.**—A city of northwestern Pa., noted for its oil industry. Pop. (1900), 13,264.
- Oil Color Painting**, 1, 206.
 Brushes, 1, 206.
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 Instruction in, 1, 206.
 Mahl-stick, 1, 206.
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 Subjects, 1, 207.
- Oil-rock**, 5, 225.
 Boring for oil, 5, 226.
- Oil tanning**, 5, 246.
- Oil-tree**, 5, 5.
- Oise.**—A river 187 miles long in northern France, which joins the Siene 15 miles northwest of Paris.
- Ojibwa, or Chippewa, Indians.**—A large tribe of American Indians of Algonquin stock, now numbering over 30,000, divided about equally between the U. S. and Canada. Their original hunting range extended over both shores of Lakes Huron and Superior, and across northern Minn. into the mountain region of Dak. Being very powerful they carried on many wars and wandered far and wide, but by 1851 they had been crowded west of the Mississippi.
- Okeechobee Lake.**—A lake in southern Fla. Length, about 40 miles.
- Okefinokee Swamp.**—A large swamp in southeastern Ga. and the adjoining part of northern Fla.
- Oken**, 14, 24.
- Oklahoma.**—Formerly a territory of the United States, bounded by Kansas and Colorado on

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- the north, Indian Territory on the east, Texas on the south, and New Mexico on the west. Area, 39,030 sq. miles; pop., about 200,000. In 1906, by act of Congress, Oklahoma and Indian Territory were combined into a new state called Oklahoma.
- Oklahoma City.**—A town in the eastern part of Oklahoma, on the North Fork of the Canadian River. Pop. (1900), 10,037.
- Olaf.**—The first Christian king of Sweden, called the Lap-king. Reigned 993-1024.
- Olaf, Saint.**—King of Norway, who consolidated the kingdom and introduced Christianity. Reigned 1015-28, 10, 249.
- Olaf Trygvesson, or Trygvasson.**—(956-1000.) King of Norway about 996-1000. He was killed in naval battle by the king of Sweden and Denmark.
- "Old Abe,"** a famous eagle, 4, 135.
- "Old Baldy."**—An army name for Gen. William F. Smith.
- Oldcastle, Sir John.**—Born at Hertfordshire, England; burned at London, 1417. An English nobleman who was a successful general in the French War.
- Old Colony, 11, 62.**
Club, 11, 57; 13, 97.
- Old Dominion, 11, 62.**
- Oldenburg.**—A grand duchy of Northern Germany and a state of the German empire; an agricultural district. Area, 2,479 sq. miles.
- Oldest Book, The.**—The oldest book in the world is a papyrus containing the proverbs of Ptahhotep, an Egyptian king, who reigned some 3000 B. C., which was before the birth of Abraham. It has been in part translated by Cabas, and others, and may be seen in English dress in J. D. Heath's "Record of the Patriarchal Age."
- Oldfield, Anne.**—(1683-1730.) A famous English actress.
- Old French War, 11, 57.**
- Old Hundredth, or Hundred.**—A popular psalm-tune, first published in the "Senevan Psalter," 1551-52.
- "Old Ironsides."**—The popular name for the U. S. frigate "Constitution."
- "Old Jack."**—A familiar name given to Gen. Thomas J. ("Stonewall") Jackson by his soldiers.
- Old John Brown of Ossawatimie, 11, 343.**
- Old Man and His Son,** Turkish fable, 3, 181.
- "Old Man Eloquent," 11, 273, 395.**
- Old North State.**—A name sometimes given to the state of North Carolina.
- Old Orchard Beach.**—A seaside resort in Me.
- "Old Pap," 12, 99.**
- Old Point Comfort.**—A fashionable watering place of Va. situated at the mouth of the James River.
- Old Probabilities.**—A nickname for the chief signal-officer of the Signal Service Bureau.
- "Old Put," 12, 99.**
- "Old Reliable."**—A nickname of Gen. George H. Thomas.
- "Old Rosey," 12, 99.**
- "Old Rough and Ready," 11, 313, 314; 12, 99.**
- "Old Slow trot," 12, 99.**
- Old South Church, 11, 62.**
- Old Style, 13, 95, 103.**
- "Old Tecump," 12, 99.**
- Old Testament in Arabic Legends, 3, 213.**
Scholars, Four schools of, 3, 213.
- "Old Tippecanoe," 11, 288, 395.**
- Old Virginia.**—The original state of Virginia which was divided during the Civil War. The term is sometimes used also to distinguish Virginia proper from West Virginia.
- Olea Europaea, 5, 5.**
Oleaster, 5, 5.
Sativa, 5, 5.
- Oleander, 5, 70.**
Symbolism of, 1, 199.
- Ole Bull.**—(1810-1880.) A Norwegian violinist and composer, 14, 23.
- Olefiant gas, 5, 229.**
- Oleomargarine, 5, 232.**
- Olfactory nerve, 1, 283.**
- Oliphant, Laurence.**—(1829-1888.) An English writer, traveler, and diplomatist.
- Oliphant, Mrs. (MARGARET OLIPHANT WILSON).**—(1828-1897.) British novelist and biographical writer.
- Olive oil, 5, 5.**
Symbolism of, 1, 198; 5, 6,
tree, 5, 5.
- Oliver, Andrew, 11, 62.**
- Oliver, Isaac, 9, 274.**
- Olives, Mount of.**—A ridge of hills situated east of Jerusalem, often mentioned in the New Testament. Highest point, 2,672 feet.
- Olmstead, Frederick Law.**—(1822-) A noted American landscape gardener.
- Olmstead et al. vs. Rittenhouse's Executrixes.**
—In 1779, Olmstead and other Conn. men were impressed as sailors into the service of the British sloop "Active." They mutinied and gained possession of the vessel. Later they were captured by the Pa. brig, "Convention." The Pa. court of admiralty adjudged the "Active" a lawful prize and divided up the prize money, giving one-fourth to Olmstead and the others. They in turn claimed the whole amount. After much litigation, the U. S. Supreme Court, in 1809, executed judg-

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- ment in favor of the plaintiffs. The opposition on the part of Pa. was so violent that the decree was not carried out.
- Olmütz.**—The third city of Moravia, and one of the chief fortresses of the Austrian empire.
- Olney.**—A town in Buckinghamshire, England; the home of Cowper, the poet.
- Olney, Richard.**—Born at Oxford, Mass., 1835. An American lawyer and statesman; appointed attorney-general in 1893; Secretary of State in 1895, on the death of Walter Q. Gresham.
- Olonetz.**—A government in northwestern Russia. Capital Petrozavodsk. Area, 57,439 sq. miles.
- Olustee (Fla.), Battle of,** 12, 99.
- Olympia.**—In ancient geography, a valley in Elis, Peloponnesus, Greece. It is famous as the seat of the Temple of Zeus and of the Olympic games.
- "Olympia,"** 12, 347.
- Olympia.**—The capital of the state of Washington. Pop. (1900), 4,082.
- Olympiads,** 10, 191.
- Olympias.**—The wife of Philip II. of Macedon, and mother of Alexander the Great. Put to death 316 B. C.
- Olympic Games, The.**—They were the greatest of the four Panhellenic festivals of the ancient Greeks and served as a division of time into Olympiads. They were celebrated at intervals of four years, 10, 191; 13, 103.
- Olynthiac Orations.**—Three orations delivered by Demosthenes at Athens for the purpose of inducing the Athenians to assist Olynthus against Philip II. of Macedon.
- Omaha.**—The capital of Douglas Co., Neb., and the largest city in the state; an important commercial and railway center. Pop. (1900), 102,555.
- Omaha Indians.**—A tribe of the Sioux stock of North American Indians, formerly dwelling near Council Bluffs, Iowa, but now occupying the reservation in northeastern Nebraska. They number less than 1,200.
- Omar Khayyam** (*ō'mār khī-yam'*).—(11th and 12th centuries.) A celebrated Persian astronomer and poet. His works have been translated by Fitzgerald and others.
- Omar, Mosque of, or Kubbet es-Sakhra.**—A famous mosque on the platform of the temple in Jerusalem.
- Omdurman.**—A city in the Sudan situated on the Nile opposite Khartum. Here, in 1898, the dervishes were defeated by the British and Egyptian troops under Sir Herbert Kitchener.
- Omnibus Bill,** 11, 395.
- Omphale,** 10, 107.
- Omsk.**—The capital of a general government of west Siberia; situated in the province of Ak-molinsk.
- Onagra biennis,** 5, 19.
- Onega, Lake.**—Situated in the government of Olonetz, northwestern Russia; the second largest lake in Europe. Area, 3,763 sq. miles.
- Oneida Community.**—A religious brotherhood, founded in 1847 on Oneida Creek, N. Y. It was originally communistic but in 1879 family life was restored and in 1880 it was organized as a joint stock company.
- Oneida Indians.**—A tribe of the Iroquois stock of North American Indians, formerly occupying the region east of Oneida Lake, N. Y. They now number about 3,000, and most of them are on the reservation at Green Bay, Wis.
- Oneida Lake.**—A lake in central N. Y., having outlet into Lake Ontario.
- O'Neill, Eliza.**—(1791–1872.) A noted Irish tragic actress.
- Onion,** 5, 70.
- Onomatopoeitic speech of children,** 2, 111.
- Onondaga Indians.**—A small tribe of the Iroquois stock of the North American Indians, now numbering about 900 and dwelling near the creek and lake in N. Y. state which bear their name.
- Onondaga Lake.**—A small lake in central N. Y.; its outlet is Seneca River.
- Ontario.**—A province of the Dominion of Canada. Capital, Toronto. Chief industries, fruit and grain raising, mining, and manufacturing. Area, 219,650 sq. miles. Pop. (1901), 2,182,942.
- Ontario, Lake.**—The smallest of the five great lakes. It lies between Ontario and New York state, connected with Lake Erie by the Niagara River. Length, 190 miles; width, 55 miles.
- "On to Richmond,"** 12, 99.
- Onychophora,** 4, 320.
- Onyx,** Fabled origin of, 1, 193.
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Symbolism of the, 1, 197.
- Oochisrava,** 10, 10.
- Opal,** October birthstone, 1, 196.
- Opecanchanough,** 11, 42.
- Opelousas.**—The capital of St. Landry Parish, La. Pop. (1900), 2,981.
- Opera parties,** 1, 53.
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 Magic Flute, 9, 163.
 Martha, 9, 164.
 Mignon, 9, 165.
 Pagliacci, 9, 167.
 Parsifal, 9, 168.
 Tannhäuser, 9, 170.
 William Tell, 9, 171.

Opie, John.—(1761–1807.) A noted English painter.

Opium.—The dried juice of the unripe capsule of the common or white poppy (*Papaver somniferum*). It is one of the most valuable of medicines. The common poppy is a native of the warm regions of Asia and in British India its cultivation forms an extensive branch of agriculture, 5, 32.

Opium War.—War between China and Great Britain, due to the Chinese Government's attempts to prevent the importation of opium. Began 1840, ended 1842, 10, 161.

Oporto.—One of the chief cities of Portugal; capital of the province Entre Douro e Minho.

Opossum, The, 4, 56.
 Crab-eating, 4, 57.
 Flesh of the, 4, 56.
 Food of the, 4, 56.
 Geographical range of the, 4, 56.
 Home of the, 4, 56.
 Mode of carrying young, 4, 56.
 Pouch of the, 4, 56.
 Tail of the, 4, 56.

Optic, Oliver.—The pen name of William Taylor Adams.

Optic nerve, 1, 284.

Optics, 5, 295.

Oral agreements, 13, 122.

Orange, 4, 472.
 Bergamot, 4, 473.
 Bigarade, 4, 473.
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 Qsage, 4, 472.
 Seedless, 4, 473.
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Orange — *Continued.*

Sweet, 4, 473.

Washington navel, 4, 473.

Orange.—A city in Essex Co., N. J. Pop. (1900), 24,141.

Orange Free State.—A British colony in southern Africa. Capital, Bloemfontein. Area, 52,000; pop., over 200,000.

Orange, William of, 10, 327.

Orange-crowned warbler, 4, 186.

Orang-outang, 4, 64.

Orator of the Platte.—A popular sobriquet for William Jennings Bryan, of Nebraska.

Oratorios:—

Creation, The, 9, 113.

Elijah, 9, 120.

Hercules, 9, 110.

Israel in Egypt, 9, 110.

Judas Maccabæus, 9, 110.

Messiah, 9, 110, 111.

Mount of Olives, 9, 90.

Samson, 9, 110.

Saul, 9, 110.

Oratory, 8, 456.

As a means of culture, 8, 249.

Orbicularis palpebrarum muscle, 1, 275.

Orbit of heavenly bodies, 5, 110.

Orchard, Largest, in the World.—The largest orchard in the world is in Barbara, California, U. S. A., and belongs to Elwood Cooper. It extends to 1,700 acres, and contains 10,000 olive trees, 3,000 English walnut trees, 4,500 Japanese persimmon trees, 10,000 almond trees, and about 4,000 other fruit and nut trees. This orchard is said to bring the owner an income of not less than \$750 per acre. There are many fine orchards in Jersey and Guernsey; in the former island is an orchard said to contain 60,000 pear trees.

Orchard Knob (Tenn.).—A knoll lying in front of Chattanooga. Generals Grant and Thomas watched the progress of the battle from this point Nov. 23-25, 1863.

Orchard Oriole, 4, 164.

Orchestra, 9, 208.

Bach's treatment of the, 9, 209.

Brass, 9, 209.

Cavalli's experiments with the, 9, 208.

Choir, The Wood, 9, 209.

Harp, 9, 210.

Instruments, Percussive, 9, 210.

Monteverde, Founder of the modern, 9, 208.

Oboe, The, 9, 209.

of Beethoven, 9, 209.

Haydn, 9, 209.

Scarlatti's improvements of the, 9, 208.

Strings, The, 9, 210.

Orchestra — *Continued.*

Symphony, Birth of the, 9, 209.

The founder of the modern, 9, 208.

The old-time, 9, 208.

Orchis, Purple-fringed, 5, 26.

Ord Edward Otho Cresap, 12, 100.

Order of development, 2, 55.

the American Union, 12, 347.

Orders in Council, 11, 251.

Ordinance Office, 12, 347.

Oregon.—One of the Northwestern Pacific States of the U. S. of America, lying between Wash. on the north and Cal. on the south. It is traversed by the Cascade and other mountain ranges. Its chief products are lumber, wheat, salmon, wool, and fruit. Admitted to the Union in 1859. Capital, Salem; principal city and port, Portland. Area, 96,030 sq. miles; pop. (1900), 413,536. Called the Webfoot State.

"Oregon," 12, 347.

O'Reilly, John Boyle.—Born at Dowth Castle, County Meath, Ireland, 1844; died at Hull, Mass., 1890. An Irish-American journalist and poet.

"O'Reilly, Miles," 12, 17.

Orellana, 11, 40.

Organ, Largest, in the world, 5, 395.

Organic Acids, 5, 231.

Chemistry, 5, 224.

Organized effort, Value of, 2, 375.

Motherhood, 2, 375.

Oriental Nations, 10, 178.

Original package, 12, 347.

Orinoco.—The most northern of the three great rivers of South America. Length, about 1,350 miles, 11, 40.

Oriole, Baltimore, 4, 162.

Eggs of the, 4, 118.

Geographical range of the, 4, 162.

Nest of the, 4, 118.

Orchard, 4, 164.

Orion.—A giant hunter, of Greek mythology. After being slain by Artemis he was changed into a constellation, 5, 140, 141; 10, 93.

Oriskany (N. Y.), Battle of, 11, 123.

Orkney, or Shetland Islands.—A group of islands off the north coast of Scotland from which they are separated by Pentland Firth. They are 67 in number, 29 being inhabited. Area, 376 sq. miles; pop., over 30,000.

Orléans.—In France; the capital of the department of Loiret. It has important commercial and manufacturing interests, and has been the scene of a number of battles.

Orleans, Duke of, 10, 341.

Siege of, 10, 268, 407.

Orléans, Maid of.—See JOAN OF ARC.

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- Orleans, Territory of.**—The former name given to the present state of Louisiana. The original territory was laid out in 1804, shortly after the Louisiana purchase. In 1810 it was enlarged by the addition of what was called West Florida. The territory as thus augmented was, Apr. 12, 1812, admitted to the Union under the name of Louisiana.
- Orloff Diamond, The.**—The chief jewel in the Russian scepter; weight 193 carats. Presented to Catharine II. by Count Grigori Orloff.
- Orohippus**, 5, 466.
- Orpheus**, 10, 92.
- Orpheus C. Kerr.**—A paraphrase of "office seeker," pseudonym of Robert H. Newell. (See NEWELL, ROBERT H.)
- Orr, James Lawrence.**—(1822-1873.) An American politician; member of Congress from S. C. (1849-59); speaker of the House (1857-59); Confederate senator (1862-65); governor of S. C. (1865-68); and U. S. minister to Russia (1873).
- Orthophosphoric acid**, 5, 197.
- Orthoptera**, 4, 360.
- Oryzasativa**, 5, 88.
- Osage.**—A river of Kansas and Missouri, flowing into the Mississippi River. Length, about 500 miles.
- Osage Indians.**—A tribe of Sioux stock; divided into two classes: the Great or Highland Osages and the Little or Lowland Osages. Having ceded all of their land to the government, they now occupy a reservation in Oklahoma; they number about 1,600.
- Osage Orange, The**, 4, 472.
- Osborn vs. United States Bank**, 12, 347.
- Os Calcis**, 1, 274, 276.
- Osceola.**—(1804-1838.) A Seminole chief, leader during the first part of the second Seminole War (1835-37).
- Osgood, Samuel**, 11, 251.
- Oshkosh.**—The capital of Winnebago Co., Wis.; manufactures builders' materials—doors, blinds, etc. Pop. (1900), 28,284.
- Osiris, The God-Man.**—See EGYPTIAN MYTHOLOGY, 10, 72.
- Oskaloosa.**—The capital of Mahaska Co., Iowa. Pop. (1900), 9,212.
- Osman I., or Othman.**—Died, 1326. Founder of the Ottoman Empire.
- Osman II.**—Sultan of Turkey (1618-22); son of Achmet I., killed 1622.
- Osman III.**—Sultan of Turkey (1754-57).
- Osprey, The**, (see HAWK), 4, 141.
Nest of the, 4, 141.
- Ossa innominata**, 1, 274.
- Ostend Manifesto**, 11, 322.
- Osterhaus, Peter Joseph.**—Born in Germany, 1820. A noted soldier in the Civil War; appointed maj.-gen. in 1864.
- Ostracism**, 10, 194.
Details of, 10, 198.
- Ostrander, Catherine**, wife of Thurlow Weed, 1, 231.
- Ostrich**, 4, 231.
Eggs of the, 4, 118.
Nest of the, 4, 118.
- Ostrogoths**, 10, 233.
- Oswego.**—The capital of Oswego Co., N. Y., situated at the mouth of the Oswego River; foreign and coasting trade; leading manufactures of starch. Pop. (1900), 22,199.
- Oswego (N. Y.), Capture of**, 11, 251.
- Oswego River.**—In N. Y., flowing into Lake Ontario. Length, 24 miles.
- "Othello," or The Moor of Venice, The Tragedy of.**—A tragedy by Shakespeare, first produced in 1604.
- Otho**, Emperor of Rome, 10, 227.
King of Greece, 10, 363.
the Great, 10, 242, 260.
- Otis, James**, 11, 62, 124.
- Otis, Stephen Elwell**, 12, 100.
- Otsego Lake.**—A lake in Otsego Co., N. Y., the source of the Susquehanna River.
- Ottawa.**—(1) The capital of La Salle Co., Ill. Pop. (1900), 10,558. (2) The capital of Franklin Co., eastern Kan. Pop. (1900), 6,934.
- Ottawa.**—The capital of the Dominion of Canada, is situated on the Ottawa River, 87 miles above the St. Lawrence River. It is 126 miles from Montreal, 95 from Kingston, with which it is connected by the Rideau Canal. Pop., 44,154.
- Ottawa Indians.**—A tribe of the Algonquin stock of American Indians. They originally dwelt in the region of the Ottawa River, Canada, were driven westward to Lake Superior, then located in the region about the present site of Chicago, and finally scattered in all directions and most of them lost their identity. Those that remain, about 5,000 in number, are now in the Indian Territory.
- Ottendorfer, Mrs. Anna**, 1, 241.
- Otter, The**, 4, 53.
Fur of the, 4, 54.
Habits of the, 4, 53.
Home of the, 4, 53.
Sliding down hill, 4, 54.
Tail of the, 4, 54.
- Otterburn.**—A village near the Scottish border in Northumberlandshire, England. Here was fought the battle of Otterburn, or Chevy Chase, in 1388.

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- Otter Creek.**—A river in western Vt., having its outlet into Lake Champlain. Length, about 90 miles.
- Otter Tail Lake.**—A lake of western Minn.
- Ottilla and the Death's Head,** Austria fairy tale, 3, 102.
- Otto, or Otho I.,** "The Great."—(912-973.) Crowned emperor of the Holy Roman Empire, 962, 10, 242.
- Otto II.**—(955-983.) Son of Otto I. Emperor of the Holy Roman Empire, 973-983.
- Otto III.,** "The Wonder of the World."—(980-1002.) Son of Otto II. Emperor of the Holy Roman Empire (983-1002).
- Otto IV.**—(1174-1218.) Son of Henry the lion, duke of Saxony and Bavaria. Emperor of the Holy Roman Empire; crowned in 1209.
- Ottoman Empire,** 10, 287, 340.
decadence, 10, 327, 340.
- Ottomans.**—The branch of the Turks that established the Turkish empire; originally dwellers in Central Asia.
- Otumba,** Cortez's victory at, 11, 38.
- Otway, Thomas.**—(1652-1685.) An eminent English tragic poet, principal representative of the English classical school.
- Ouranism,** 10, 51.
- Ourique, Battle of,** 10, 285.
- Our Lady's Slipper,** 5, 27.
- Ouseley, Sir Frederick Arthur Gore.**—(1825-1889.) English musician, composer, and writer on music.
- Outdoor games,** 6, 168.
- Outram, Sir James.**—(1803-1863.) An English general, distinguished for his services in India.
- Ovary of a flower,** 4, 397; 5, 11.
- Oven bird,** 4, 186.
- Overbeck, Friedrich Johann.**—(1789-1869.) A noted German painter; founder, with others, in 1810, of the Brotherhood of Preraphaelites.
- Overdraw,** 13, 166.
- Overland Route.**—(1) The route between England and India, by way of France and Italy, the Suez Canal, Red Sea, and Indian Ocean.
(2) In former times, the land route from the east to California, *via* Utah.
- Overpraising children,** 2, 463.
- Overijssel.**—A province of Netherlands bordering on the Zuyder Zee. Capital, Zwolle. Chief industry, cattle raising.
- Oviedo.**—A province of northern Spain. Area, 4,091 sq. miles.
- Ovules of a flower,** 4, 398.
- Owasco Lake.**—In Cayuga Co., N. Y. Length, about 11 miles.
- Owego.**—The capital of Tioga Co., N. Y. Pop. (1900), 5,039.
- Owen, Robert Dale,** 14, 205.
- Owens, John Edward.**—(1824-1886.) A noted actor and manager.
- Owensboro.**—The capital of Daviess Co., Ky. Pop. (1900), 13,189.
- Owen's Lake.**—A salt lake in eastern Cal. Length, about 18 miles.
- Owen Sound.**—An inlet of Georgian Bay, Lake Huron.
- Owen's River.**—Flowing into Owen's Lake, Cal. Length, about 175 miles.
- Owl, The,** 4, 141.
an emblem of wisdom, 4, 141.
Barred, 4, 144.
Burrowing, 4, 144.
Characteristics of, 4, 143.
Eggs of the, 4, 118.
Food of the, 4, 142.
Great-horned, 4, 144.
Hawk, 4, 143.
Hoot, 4, 144.
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Nest of the, 4, 118.
Parrot, 4, 209.
Saw-whet, 4, 144.
Screech, 4, 144.
Short-eared, 4, 144.
Snowy, 4, 143.
Sparrow, 4, 144.
- Owl's Head.**—A cape at the western entrance to Penobscot Bay, Me.
- Owosso, or Owasso.**—A city in Shiawassee Co., Mich. Pop. (1900), 8,696.
- Owyhee River.**—A river in northern Nev., southwestern Id., and southeastern Ore. Length, about 350 miles.
- Oxalic acid,** 5, 231.
- Oxen and The Timber,** Turkish fable, 3, 181.
- Oxford.**—Capital of Oxfordshire, England, noted chiefly as the seat of Oxford University. It stands at the junction of the Cherwell and the Thames.
- Oxford, Provisions of.**—A series of acts of Parliament, enacted in 1258 at Oxford, providing committees to council the king, negotiate funds, adjust the grievances of church and state, etc., 10, 262.
- Oxford, University of,** consists of 20 colleges, 14 of which were founded previous to the Reformation. It is said that the first was founded by king Alfred. The colleges included under the university are:—University, Balliol, Merton, Exeter, Oriel, Queen's, New College, Lincoln, All Souls, Magdalen, Brasenose, Corpus Christi, Christ Church, Trinity St. John's, Jesus, Wadham, Pembroke, Worcester, Keble, St. Mary Hall, Magdalen Hall, New Inn Hall, St. Alban Hall, St. Edmund

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Hall. The revenue of the colleges and the university amounts to about two million dollars a year.

Oxford Street.—Formerly Tyburn Road. The chief commercial thoroughfare of London, leading from the northwestern suburbs to the city.

Oxygen, 5, 153.

Experiments with, 5, 152.

in the air, 5, 153.

Use of, 5, 156.

Oyster, 4, 372.

bed, 4, 372.

Characteristics of the, 4, 373.

Pearl oyster, 4, 373.

, Reproduction of the, 4, 372.

Ozark Mountains.—A group of low mountains in southwestern Mo., northwestern Ark., and the eastern part of Ind. Ter. Height, 1,500–2,000 ft.

Ozone, 5, 154.

P

Paca, William.—(1740–1799.) A politician, a signer of the Declaration of Independence, and governor of Md. (1782–85).

Pacific Islands, How parceled out, 11, 33.

— Railroads, 12, 348.

Package, Original, 12, 347.

Packard, Alpheus Spring.—(1798–1884.) An American educator, from 1824 professor in Bowdoin College, Maine, 8, 218.

on a college training, 8, 141.

Packer, Asa.—(1806–1879.) An American capitalist and politician; founder of Lehigh University and projector of the Lehigh Valley Railroad.

Paco, The, 4, 93.

Paderewski, Ignace Jan.—Born, 1860. The famous Polish pianist, was trained at Warsaw, Berlin, and under Leschetizky at Vienna; made his first appearance in Paris in 1889, and in London the following year; since then his career has been a series of triumphs, if anything, more complete in America than in Europe; his power over his audience is probably greater than that of any pianist since Liszt; he lives in a villa in Switzerland.

Padua.—Capital of the province of Padua, in Italy. It contains several famous churches and a cathedral, and during the Middle Ages was a center of art and literature.

Paganini, Nicolo.—(1782–1840.) Famous Italian violinist.

Page, Thomas Nelson.—Born in Hanover Co., Va., 1853. A lawyer and author; especially noted for his stories of the South.

Page, William.—(1811–1885.) An American portrait-painter. His other paintings include "Moses and Aaron on Mount Horeb" and "Flight into Egypt."

Paget, Sir James, 14, 250.

Pahlavi writings, 3, 366.

Paine, John Knowles.—Born, 1839. A noted American composer and organist; identified with the musical instruction at Harvard University.

Paine, Robert Treat, 11, 124.

Paine, Thomas.—(1737–1809.) An Anglo-American political writer and free-thinker; best-known by his "Age of Reason."

Paint-brush, "Badger blender," 4, 58.

Painted bunting, 4, 190.

Painters, American, 9, 329.

Abbey, E. A., 9, 333.

Beaux, Cecilia, 9, 332.

Beckwith, J. C., 9, 332.

Benson, 9, 332.

Bunce, Gedney, 9, 331.

Chapman, 9, 331.

Chase, William M., 9, 331.

Cox, Kenyon, 9, 332.

De Haas, 9, 331.

Eaton, 9, 332.

Gifford, Sevani, 9, 331.

La Farge, John, 9, 333.

Maynard, 9, 331.

Rehn, 9, 331.

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Sargent, 9, 331.

Snell, 9, 331.

Tarbell, 9, 331.

Thayer, 9, 332.

Tryon, 9, 331.

Twachtman, 9, 331.

Vedder, Elihu, 9, 333.

Walker, Horatio, 9, 331.

Weir, 9, 331.

Weir, Alden, 9, 332.

Whistler, 9, 333.

Wyatt, 9, 332.

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Painting, a kindergarten occupation, 7, 34.

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Painting, British, 9, 273.

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Dutch, 9, 300, 336.

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English School of, 9, 337.

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German, Modern, 9, 327.

Italian, 9, 336.

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Painting, Measure of, 13, 147.

on silk, 1, 224.

Colors needed, 1, 224.

Transferring the design, 1, 224.

on velvet, 1, 225.

Transferring the design, 1, 225.

Palais Royal.—Built by Richelieu, 1629-34, in Paris, and left by him to the king.

Palatine Hill.—One of "the seven hills" of Rome; the traditional seat of the city founded by Romulus, 10, 209.

Paleologus, 10, 288.

Paleontology, 5, 461.

Paleozoic period, 5, 462.

Palermo.—A seaport of Sicily, situated on the Bay of Palermo; the largest city and the commercial center of Sicily. Pop., about 300,000.

Palestine.—A country lying along the eastern coast of the Mediterranean Sea, formerly called Canaan. After the Exodus it was conquered by the Hebrews and divided among the twelve tribes. In the time of Christ the divisions west of the Jordan were Galilee, in the north, Judea in the south, and Samaria lying between. Its location upon the highway from Asia to Africa has made it one of the great battle-grounds of the world. It has been successively under the rule of the Babylonian, Persian, Roman, and Byzantine empires. Since the 7th century it has been under Mohammedan sway except for a brief interval at the time of the Crusades. It has been under Turkish rule since 1516. Its area is about 11,000 sq. miles, or a trifle larger than the state of Vt., which it closely resembles in

shape. The chief city is Jerusalem. Pop., about 400,000.

Palestrina, Giovanni Pierluigi da.—(1524?-1594.) A celebrated Italian musician. His works mark an epoch in the history of music.

Palgrave, Francis Turner.—(1824-1897.) An English poet.

Palisades, The.—A beautiful natural feature of the Hudson River, in the form of a basaltic bluff, 200-250 feet in height, extending along the western shore, in the states of New York and New Jersey.

Palissy, Bernard.—(1510-1589.) A celebrated French potter and enameler, 1, 218; 14, 25.

Palladium, 10, 90.

Pallas, Athene.—(1) In Greek mythology, the goddess of wisdom and war, 1608. (2) Peter Simon (1741-1811), a German naturalist and traveler. (3) Albani. A Greek bust of colossal size in the Glyptothek at Munich. (4) Of Velletri. A Roman statue copy of a Greek original, of great size, now in the Louvre, Paris, 10, 90.

Pall Mall.—A beautiful street in London extending from Trafalgar Square to Green Park.

Palm, 5, 6.

Ivory, 5, 6.

of the Bible, 5, 1.

Palmaris longus muscle, 1, 275.

Palmer, Erastus Dow, 9, 412.

Palmer, James Sheddon, 12, 100.

Palmer, Mrs. Pauline, "If I Were a Girl Again," 1, 260.

Palmer, John McCaulay.—(1817-1900.) A general in the Civil War.

Palmer, Walter Launt.—Born at Albany, N. Y., 1854. An American artist.

Palmerston, Viscount (HENRY JOHN TEMPLE).—(1784-1865.) A prominent English statesman.

Palmitic acid, 5, 231.

Palmyra.—A city supposed to have been built by King Solomon; situated on an oasis in the desert east of Syria. It is now remarkable for its antiquities, 10, 400.

Palo Alto.—A noted California stock-farm, established by Leland Stanford.

Pamlico Sound.—An arm of the Atlantic, east of N. C. It is joined to Albemarle Sound on the north by Croatan and Roanoke sounds and to the Atlantic by Ocracoke, Hatteras, and other inlets.

Pampaloni Luigi, 9, 399.

Pampas.—A name given to the vast grassy plains of South America, somewhat similar to the North American prairie.

grass, 5, 88.

Pan, 10, 104.

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- Panama Canal**, 5, 401; 12, 177.
 Commission, 12, 179.
 Distances saved by, 12, 178.
 New republic of, 12, 177.
- Panama Congress**.—An assemblage of representatives of the South and Central American Republics in June, 1826, to deliberate on the rights of their states.
- Panathenaea**, 10, 90.
- Pancha-tantra**, 3, 167.
- Panics, Great Financial**, 13, 103.
- Pan-Ku**, 10, 42.
- Pansy, Symbolism of**, 1, 198.
- Pantheon**.—A building in Rome completed by Agrippa in 27 B. C. and now dedicated as the Church of Santa Maria Rotonda. It is the burial place of Raphael and Victor Emmanuel II.
- Pantheon, Hindu**, 10, 3.
- Panther**, 4, 73.
- Pantomime**, 2, 132.
- Paoli**.—In Chester Co., Pennsylvania, 20 miles from Philadelphia; the scene of an engagement between the British and the Americans, Sept. 20, 1777, in which the Americans, under General Wayne, were defeated.
- Paoli, Pascal**.—(1725–1807.) A Corsican general and patriot.
- Papal Insignia, The**.—Embraces the tiara, cross, and ring. The tiara, or high cylindrical cap, with cross of gold on top, symbolizes the Pontiff's civil or temporal rank, as the keys symbolize his ecclesiastical power. The right of the Pope to wear a crown is said to have been granted to the bishops of Rome by Constantine the Great, and by Clovis, founder of the French monarchy. The Pontifical staff, or Papal Cross (a Greek cross with three transoms) is symbolical (as the three crowns are) of the Pope's threefold sovereignty. The ring is the Papal signet.
- Papal Power**, 10, 250.
- Papal States**.—A former dominion of Italy governed directly by the Papal See; comprising the Romagna, the Marches, Umbria, and the great province of Rome.
- Papaveraceæ**.—A natural order of exogenous plants, herbaceous, usually containing a milky juice. Opium is its principal product. Many species are used for medicinal purposes.
- Papaw, The**, 4, 474.
- Paper**, Drawing-paper, 7, 268.
 Kind to use in correspondence, 1, 89.
 Measure, 13, 150.
 Negotiable, 13, 166.
 Rice, of China, 4, 478.
 Sizes of printing, 13, 219.
- Paper-cutting**, a kindergarten occupation 7, 49.
- Paper-folding**, for children, 2, 420.
 a kindergarten occupation, 7, 42.
- Paper-interlacing** for children, 2, 423.
 a kindergarten occupation, 7, 36.
- Paper-making**, Chemistry of, 5, 237.
 from rags, 5, 238.
 wood-pulp, 5, 239.
 Sizing, 5, 238.
 Sulphite process, 5, 239.
- Paper mat-weaving**, 2, 417.
 a kindergarten occupation, 7, 49.
- Paphos**.—The name of two cities of ancient Cyprus.
- Papier-maché**, 5, 239.
- Papilionaceæ**.—Suborder of the natural order *Leguminosæ*. The name is derived from Lat. *papilio* meaning "a butterfly." The flowers have five petals; about 4,800 species are known, 5, 63.
- Papineau, Louis Joseph**.—(1786–1871.) A French-Canadian statesman.
- Papirius Cursor**, 10, 213.
- Papua**.—See NEW GUINEA.
- Papyrus**.—A genus of plants of the natural order *Cyperaceæ* of which there are seven species. It grows eight to ten feet high and has a strong, woody aromatic root, with long keel-shaped leaves. Up to the 12th century, papyrus, after passing through an elementary process of manufacture, was used for the making of books but after that period was superseded by parchment.
- Papyrus**, 5, 54, 70.
 Making and use of, 5, 237.
- Parabola**, 7, 285.
- Paracelsus**.—A poem by Robert Browning published 1835–36.
- Paradise of the Chinese**, 1, 194.
 of the Koran, 3, 398.
- Paraffin**, 5, 228.
- Paraguay**.—A republic of South America lying south of Brazil and Bolivia. Capital, Asuncion. The products are of a tropical nature. Number of white inhabitants, (1905), about 600,000. The country has limited railway and telegraph facilities.
- Parakeet**, 4, 210.
- Paraladha**, 10, 12.
- Parallelogram**, 7, 248.
 To find the area of a, 13, 151.
- Parallelopiped**, To model a, 7, 248.
- Parasu Rama**, 10, 12.
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- Parcae, or Fates**, 10, 103.
- Parchment**, 5, 248.
- Pardons**, 12, 348.
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- Parenthood**, 2, 377.
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- Parents**, Assumption of infallibility a mistake, 2, 300.
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 Manual training, 7, 8.
 Personal authority of, 2, 206.
- Parepa-Rosa**.—(1836-1874.) A famous soprano singer in oratorio and opera.
- Parietal bone**, 1, 272.
- Parijata**, 10, 10.
- Paris**.—The capital of France, situated on both banks of the Seine, is the third city in size, and the first in splendor, in the world. It has large manufacturing and commercial interests, and is noted for its patronage of the fine arts. It has been greatly beautified by various sovereigns, especially Napoleon I. and Napoleon III. Among its magnificent buildings are the beautiful church of the Madeline, the Grand Opera, which is the most sumptuous theater in existence, and the palace of the Louvre, which is in the foremost rank of museums of fine arts. Its area of 30 sq. miles, is inclosed within 22 miles of fortifications. Pop., about 3,000,000.
- Paris**.—(1) A town of Illinois. Pop. (1900), 6,105. (2) A town of Kentucky. Pop. (1900), 4,603.
- Paris**, 3, 367.
- Paris**, Count of, 10, 373.
- Paris, Monetary Conferences at**.—There have been three notable international monetary conferences, all futile, held at Paris. The first was convened in 1867; the second in 1878, and the third in 1881.
 Declaration of, 11, 373, 395.
 Second treaty of, 10, 360.
 Siege of, 11, 9.
 Tribunal of Arbitration, 12, 348.
- Paris Green**.—Arsenite of copper; a compound of oxide and arsenious acid.
- Park, Mungo**.—(1771-1806.) A noted African explorer.
- Parke, John G.**, 12, 100.
- Parker, Foxhall A.**, 12, 100.
- Parker, Francis W.**, Work of, 2, 181.
- Parker, Sir Gilbert**.—(1862-) Canadian novelist and dramatist.
- Parker, Isaac**, 11, 251.
- Parker, Theodore**.—(1810-1860.) An eminent American clergyman, author, lecturer, and reformer, 2, 392.
- Parker, Willard**.—(1800-1884.) A distinguished American surgeon.
- Parkersburg**.—The capital of Wood Co., W. Va., and second city in the state; leading industry, the refining of petroleum. Pop. (1900), 11,703.
- Parkes's method of silver-smelting**, 5, 212.
- Parkhurst, Charles Henry**.—Born at Framingham, Mass., 1842. A noted Presbyterian clergyman and reformer, of New York City. on "City and Country," 8, 102.
- Parkman, Francis**.—(1823-1893.) An eminent American historian.
- Park Range**.—A chain of the Rocky Mountains in Col., west of South Park. The highest peak is Mount Lincoln, 14,297 feet.
- Parks, National**, 12, 339.
- Parliament**, Long, 10, 319.
 of England, First, 10, 262.
 Rump, 10, 323.
- Parlor**, Arrangement of lights, 1, 14.
 Carpets, 1, 12.
 Decoration, 1, 12.
 Furniture, 1, 12.
 Mirrors in, 1, 14.
 Pictures, 1, 13.
 Rugs, 1, 12.
 Wall decoration, 1, 13.
- Parma**, Duke of, 10, 299.
- Parnassus**.—A mountain ridge in Greece near the ancient Delphi.
- Parnell, Charles Stewart**.—(1846-1891.) An Irish statesman; first president of the Irish Land League, 10, 382; 14, 266.
- Paroquet, The** (see PARROT), 4, 210.
- Parr, Catherine**, 10, 301.
- Parr, Samuel**.—(1747-1825.) A noted English scholar, 11, 62.
- Parris, Samuel**, 11, 62.
- Parrot**, 4, 208.
 African gray, 4, 209.
 Bat, 4, 209.
 Bath for, 1, 141.
 Care of, 1, 140.
 Cage, 1, 141.
 Carolina, 4, 208, 210.
 Characteristics of, 4, 208.
 Double yellow-headed, 4, 210.
 Eggs of, 4, 119.
 Food for, 1, 140.
 Nest of, 4, 119.
 Owl, 4, 209.
 Sea, 4, 221.
 Teaching to talk, 1, 140.
- Parrott, Robert Parker**.—(1804-1877.) An inventor; superintendent of the West Point iron and cannon foundry, Cold Spring, N. Y., and inventor of the Parrott gun.
- Parry, Sir William Edward**.—(1790-1855.) An English navigator and Arctic explorer.

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- Parshall, Henry F.**, 13, 440.
"Parsifal," History of the writing of, 1, 239.
Parson Brownlow, 12, 213.
Parsons, W. B., on "Civil Engineering," 13, 435.
Parthenon.—The official temple of Pallas at Athens. It was begun by Ictinus about 450 B. C., 9, 357; 10, 90; 14, 230.
Parthenon injured by the Turks, 10, 327.
Parthians, 10, 228.
Partington, Mrs.—A humorous character created by Benjamin Penhallow Shillaber (which see).
Partner, Silent, 13, 197.
Parton, Arthur.—Born at Hudson, N. Y., 1842. A landscape-painter.
Parton, James.—(1822-1891.) A biographer and miscellaneous writer.
Parton, Mrs. (SARA PAYSON WILLIS) *pseudonym*, FANNY FERN.—(1811-1872.) An American author; wife of James Parton, and sister of N. P. Willis.
Partridge, 4, 123.
 Eggs of, 4, 119.
 Nest of, 4, 119.
 Spruce, 4, 126.
Partridge-Vine, 5, 25.
Partridge, William Ordway, 9, 415.
Parula Warbler, 4, 186.
Parvati, 10, 20.
Pascal, Blaise.—(1623-1662.) A celebrated French philosopher, geometrician and writer.
Pasha.—A title of honor given to officers of high rank in Turkey. There are three classes of Pashas, and the class is distinguished by the number of horsetails borne upon their standard, being one, two or three; the Pasha of three horsetails ranks the highest.
Pasht, goddess of cats, 4, 22.
Passaic.—(1) A manufacturing city in Passaic Co., N. J., on the Passaic River. Pop. (1900), 27,777. (2) A river in N. J., which flows into Newark Bay. At Paterson it forms a cataract of 72 feet. Length, about 100 miles.
Passamaquoddy Bay.—An arm of the Atlantic, between Maine and New Brunswick. Length, about 15 miles.
Passarowitz, Treaty of, 10, 340.
Passau, Treaty of, 10, 294.
Passenger pigeon, 4, 111.
Passion, Books to cure, 2, 267.
 Treatment of, 2, 266.
Pasteurization, 5, 96.
Pasting pictures, 2, 420.
Patagonia.—The most southern portion of South America. It includes the adjoining parts of Chile, and that portion of the Argentine Republic lying south of the Rio Negro. There are flourishing coast settlements, but the interior of the country is barren and sparsely inhabited.
Patent, First woman to take out a, 7, 376.
Pater, Walter, on Della Robbia, 9, 373.
 Leonardo da Vinci, 9, 242.
 style in writing, 8, 368.
Paterson.—The capital of Passaic Co., N. J., and the third city in the state. It has many and extensive manufacturing interests. Pop. (1900), 105,171.
Paterson, or Patterson, William.—(1744-1806.) An American jurist and statesman; justice of the U. S. Supreme Court (1793-1806).
Paterson, William, 11, 63.
"Pathfinder," The, 11, 374.
Patricians, 10, 209.
Patrick, Marsena, 12, 100.
Patriots' Day, 13, 98.
Patroclus, 3, 373.
Patroons, 11, 63.
Patterson, Elizabeth, 12, 348.
Patterson's silver method, 5, 212.
Patterson, Robert, 12, 100.
Patti, Adelina.—(1843-) A celebrated soprano opera singer, the most popular of her time.
Patton, F. L., on "College Training," 8, 139.
Paul, Peter, 9, 337.
Paul, Saint.—(Suffered martyrdom 67 A. D.) The great apostle to the Gentiles.
Paul I.—Pope of Rome, 757-767.
Paul II.—(Pietro Barbo, 1418-1471.) Pope, 1464-71.
Paul III.—(Alessandro Farnese, 1468-1549.) Pope, 1534-49.
Paul IV.—(Giovanni Pietro Caraffa, 1476-1559.) Pope, 1555-59.
Paul V.—(Camillo Borghese, 1552-1621.) Pope, 1605-21.
Paul versus Virginia, 12, 348.
Paulding, Hiram, 11, 251.
Paulding, James Kirke.—(1779-1860.) Author, historian, and politician; secretary of the navy (1838-41).
Paulist Fathers.—A body of Roman Catholic monks who profess to follow the example of St. Paul.
Paulus Hook, 11, 124.
Pausanias.—(1) A Spartan general who died about 466 B. C. (2) A famous Greek geographer and writer on art, who lived in the 2d century.
Pavia, Battle of, 10, 249.
Pawnee Indians.—A confederacy of North American Indians of Caddoan stock, formerly living in Kansas and Nebraska, but now on a reservation in Oklahoma. They number about 800 and are divided into 4 tribes.

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- Pawtucket.**—(1) A town in Providence Co., R. I., on the Pawtucket River. Manufacturing interests. Pop. (1900), 39,231.
- Pawtuxet.**—A river of R. I., flowing into the Providence River.
- Payne, John Howard.**—(1792-1852.) Dramatist, actor, and song writer; author "Home, Sweet Home."
- Payne, Postmaster-General, 12, 181.**
Henry C., 12, 349.
- Peabody.**—A town in Essex Co., Mass., formerly South Danvers. It manufactures leather, morocco, etc. Pop. (1900), 11,523.
- Peabody, George.**—(1795-1869.) A merchant banker, and philanthropist; founder of the Peabody Institute in Baltimore, 14, 305.
- Peabody, Nathaniel, 11, 124.**
- Peabody Institute.**—A noted educational institution of Baltimore, founded by George Peabody.
- Peace Commission, 11, 124.**
Conferences, 12, 100.
- Peach Orchard, 12, 101.**
- Peach-tree Creek, Battle of, 12, 101.**
- "Peacock," The, 11, 251.**
- Peacock, 4, 202.**
Crested, 4, 202.
Eggs of the, 4, 119.
Fabled origin of the, 4, 203.
Nest of the, 4, 119.
- Pea Iron Ore, 5, 437.**
- Peale, Charles Willson.**—(1741-1827.) A noted American portrait-painter, 14, 360.
- Peale, Rembrandt.**—(1778-1860.) A portrait-painter, son of C. W. Peale.
- Peanut, 5, 70.**
- Pear, Bartlett, 4, 439.**
- Pear, Prickly, 5, 72.**
Sickel, 5, 72.
Tree, 4, 438.
- Pea Ridge (Ark.), Battle of, 12, 101.**
- Pearl.**—It is to disturbing influences in the domestic life of a harmless mollusk that we owe the creation of pearls—the only gem the ocean yields. Certain shell fish are able to deposit layers of a protective material around sand grains, parasites, or other foreign substance, which enters the valve and injures the soft body tissues; the finest pearls are, consequently, formed near the most vulnerable parts. The Chinese have for centuries utilized this molluscan peculiarity in the production of artificial pearls. They insert pellets within the valves of pearl mussel, and then cultivate them in ponds until a nacreous layer is secreted around the source of irritation. Pearl fishing is carried on in the rivers of several countries—Scotch pearls were famous in the Middle Ages—but the finest specimens are marine, and come from the East: Ceylon, the Persian Gulf, and Sulu Archipelago are the most productive regions. The diver's equipment used to be decidedly primitive; a stone to accelerate the descent and a rope for hauling up. This limited the fisheries to a depth of 80 feet, and few men could stay below more than a minute. A modern diving suit and air-pipe allows descents of about 108 feet, and, though at such depths the pressure can only be borne for about ten minutes, in shallow water men remain below for hours. Pearls have always been highly prized gems, good specimens are far more costly than diamonds. Successful imitations are made by filling thin glass bulbs with certain fish scales dissolved in ammonia, 1, 196.
- Pearl.**—A river in Miss., which forms part of the boundary between Miss. and La. and empties into the Gulf of Mexico. Length, over 300 miles.
- Peary, Robert Edwin.**—Born in 1854. An Arctic explorer, and civil engineer in the U. S. navy. In 1906 he reached 87° 13', N. L. the highest then reached.
- Peas, 5, 64.**
- Pea, Sweet, 5, 64.**
- Peas work, for children, 2, 423.**
- Peat, 5, 456.**
- Pea-work in Kindergarden, 7, 51.**
- Pebble and The Diamond, Russian fable, 3, 209.**
a water-worn stone, 5, 440.
- Pecan, 4, 425.**
- Peccary, 4, 69.**
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Habits of, 4, 69.
Home of, 4, 69.
- Peck, Judge James H. 12, 305.**
- Peck, John James, 12, 101.**
- Peckham, Rufus W., 12, 349.**
- Pecten, 4, 373.**
- Pectineus muscle, 1, 276.**
- Pectoralis major muscle, 1, 275.**
- Pectoral sandpiper, 4, 133.**
- Pedrarias, 11, 39.**
- Pedro I.**—(Dom ANTONIO PEDRO DE ALCANTARA BOURBON, 1798-1834.) First Emperor of Brazil.
- Pedro II.**—(Dom PEDRO DE ALCANTARA, 1825-1891.) Son of Pedro I., second Emperor of Brazil.
- Peekskill.**—A village in Westchester Co., N. Y. It has iron manufactures. Pop. (1900), 10,358.
- Peel, Sir Robert.**—(1788-1850.) A famous English statesman, 10, 380; 13, 115.

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- Peewee flycatcher**, 4, 197.
 Wood, 4, 199.
- Pegasus**.—(1) In classical mythology, the winged horse of the Muses. (2) An ancient constellation, 10, III.
- Pegram, John**, 12, 101.
- Peirce, Benjamin**.—(1809-1880.) A distinguished American mathematician and astronomer.
- Peirce, Charles Sanders**.—Born at Cambridge, Mass., 1839. A physician, mathematician, and logician, son of Benjamin Peirce. He was connected with the U. S. Coast and Geodetic Survey for many years; has been lecturer on logic at Harvard and at Johns Hopkins University.
- Peirce, Ebenezer Weaver**.—Born at Freetown, Mass., 1822. A general and historical writer. His writings include "The Peirce Family of the Old Colony," and "Indian History, Biography, and Genealogy."
- Peirce, James Mills**.—Born at Cambridge, Mass., 1834. A mathematician, son of Benjamin Peirce, professor of astronomy and mathematics in Harvard University since 1885. His works include "A Text-book of Analytical Geometry" and "The Elements of Logarithms."
- Peking**.—The capital of the Chinese empire. It consists of two cities—the Chinese city and the Tatar. Pop., over 500,000.
 Seized by Manchus, 10, 159.
 The march to, 11, 31.
- Pelasgi**, 10, 189.
- Pelham, Sir Henry**.—(1696-1754.) An English statesman.
- Pelias**, 10, 108.
- Pelican**, 4, 215.
 American white, 4, 216.
 European white, 4, 216.
- Pelican State**.—The state of Louisiana; so named from the pelican on its coat-of-arms.
- Pelopidas**.—(Killed 364 B. C.) A Theban general, leader in the liberation of Thebes from the Spartans 379 B. C., 10, 200.
- Peloponnesian War**.—A war between the Peloponnesian confederacy under the lead of Sparta and its allies on one side, and Athens and its allies on the other. It was carried on from 431 to 404 B. C., 10, 199.
- Peloponnesus**.—The modern Morea. The early name of the peninsula which forms southern Greece. Area, 8,288 sq. miles.
- Pelvic plexus**, 1, 285.
- Pelvis**, 1, 274.
- Pemberton, John Clifford**.—(1814-1881.) An American soldier; lieutenant-general in the Confederate army.
- Pemigewasset**.—A river in N. H., which unites with the Winnepesaukee to form the Merrimac. Length, about 70 miles.
- Pendleton, Edmund**, 11, 124.
- Pendleton, George Hunt**.—(1825-1889.) An American politician.
- Pendleton, William Nelson**.—(1809-1883.) A general in the Army of Northern Virginia.
- Pendulum discovered**, 10, 278.
- Penelope**, 3, 383.
- Peneus**, 10, 92.
- Penguin**.—A sea-bird inhabiting the southern hemisphere, especially the regions of Cape Horn and the Cape of Good Hope, having web feet and small flipper-like wings that are useful for swimming, but useless for flying.
- Peninsular Campaign**.—See McCLELLAN, GEORGE BRINTON.
- Peninsular State**.—A name sometimes given to Florida.
- Penitentiaries**.—Places for the confinement of convicts for punishment or reformation. The system was introduced by the Quakers of Philadelphia in 1686 when solitary confinement at hard labor was substituted for death, mutilation or whipping. The House of Refuge on Blackwell's Island, N. Y., dates from 1825, and was the first reformatory institution in the U. S. for the young.
- Penmanship, Rules of**, 13, 167.
 Value of, 8, 218.
- Penn, John**, 11, 63.
- Penn, Richard**, 11, 63.
- Penn, William**, 11, 47, 48; 14, 110, 195.
- Pennell, Joseph**.—Born at Philadelphia, 1860. An etcher and illustrator.
- Pennsylvania** (the "Keystone State").—One of the North Atlantic States of the United States of America. Capital, Harrisburg; principal city, Philadelphia. Pa. has great coal and iron mining industries; it is the leading state in iron manufactures, the third in the production of petroleum. It also has extensive glass, leather, woolen, and cotton manufactures, and is famed for its dairy products. One of the thirteen original states; territorial grant made by Charles II. to William Penn in 1681. Area, 45,215 sq. miles. Pop. (1900), 6,302,115.
- Pennsylvania Avenue**.—The principal avenue of Washington, D. C.
- Penn versus Baltimore**, 11, 63.
- Penny Postage**, 10, 381.
- Pennyroyal**, 5, 68.
- Penobscot**.—(1) A river in Me., which flows into Penobscot Bay near Belfast. Length, about 275 miles; navigable to Bangor. (2) An arm of the Atlantic Ocean, at the mouth

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- of the Penobscot River on the south coast of Me.
- Pensacola.**—(1) A seaport of Fla. It has an important export trade. Pop. (1900), 17,747. (2) An inlet of the Gulf of Mexico on the northwestern coast of Fla. Length, about 30 miles.
- Pen, Steel.**—The first steel pen was made in 1830.
- Peony, 5, 71.**
 Russian, 5, 71.
 Siberian, 5, 71.
 Swiss, 5, 71.
- People's Party, 12, 349.**
- Peoria.**—A commercial city of Ill., situated on the Illinois River. Pop. (1900), 56,100.
- Pepin.**—Died, 838. King of Aquitania, 817–838, 10, 235.
 Donation of, 10, 260.
 the Short, 10, 236, 260.
- Pepin, Lake.**—A widening of the Mississippi 40 miles southeast of St. Paul, between Minnesota and Wisconsin.
- Pepin of Heristal.**—Died, 714. Ruler of the Franks.
- Pepper, 5, 6.**
 Jamaica, 5, 50.
- Pepperell, Sir William.**—(1696–1759.) Commander of the provincial army which besieged and captured Louisburg, in 1745.
- Peppermint, 5, 67.**
- Pepys, Samuel.**—(1633–1703.) An English politician whose "Diary," covering the period between 1660 and 1669 is an authority on the Restoration.
- Pequot Indians, 11, 46.**
- Pequot War, 11, 46.**
- Percentage, 13, 19.**
- Perception, A Child's first, 2, 90.**
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- Perceval, Story of, 3, 422.**
- Perch, 4, 304.**
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 Geographical range of, 4, 304.
 Habits of the, 4, 304.
 Pike, 4, 305.
 Characteristics of, 4, 305.
 White, 4, 297.
 Yellow, 4, 304.
 Food of the, 4, 305.
 Food value of, 4, 305.
 Spawning season of, 4, 305.
- Perdicaris, Ion, 12, 212.]**
- Perdido.**—A small river and bay on the western border of Florida, separating it from Alabama.
- Peregrine falcon, 4, 139.**
- Perforating, or pricking, a kindergarten occupation; 2, 418; 7, 27.**
- Pericles, 10, 199, 393.**
- Periodic law of Chemical elements, 5, 185.**
- Peritoneum, 1, 277.**
- Periwinkle.**—A genus of gasteropodous mollusks, having a proboscis-shaped head, moderate sized foot and rudimentary siphonal canal. The shell turbinates and has no nacreous lining. It abounds on the British coast and is also common on the coast of New England.
- Perkin Warbeck, 10, 275.**
- Permit, Customs, 13, 177.**
- Pernambuco.**—Capital and a seaport of the state of Pernambuco, in Brazil. Pop., about 100,000.
- Peroneus brevis muscle, 1, 276.**
 longus muscle, 1, 276.
- Perpendicular, 7, 278.**
- Perpetual Motion, 5, 383.**
- Perry, Mathew Calbraith, 11, 251.**
 Expedition to Japan, 10, 170; 11, 27.
- Perry, Oliver Hazard, 11, 252.**
- Perryville (Ky.,) Battle of, 12, 101.**
- Perseus, 10, 110.**
 a constellation, 5, 138.
 Bronze group of, 9, 382.
- Perseverance, 8, 258.**
- Persia.**—A country of western Asia, lying between the Caspian Sea on the north and the Arabian Sea on the south, and between Afghanistan on the east and Arabia on the southwest. It rose to greatness under Cyrus about 550 B. C. and continued to be the chief world-power until conquered by Alexander the Great in the 3d century B. C. It again attained to great splendor in the 6th and 7th centuries A. D. under Khusran (Chosroes) I. and II., when it was conquered by the Saracens. The government is now an absolute monarchy, the ruler being called the shah. It has long been noted for the manufacture of carpets, rugs, shawls, laces, and silks. The religion of the state is Mohammedan. Area, 628,000 sq. miles; pop., 9,000,000.
- Persia, History of, 10, 186.**
 Invasion of Greece, 10, 188.
- Persian rugs, 1, 34.**
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- Persimmon, 4, 478.**
 Japanese, 4, 479.
- Persistence, 8, 258.**
- Personal hygiene, 1, 272.**
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 Not disposed of by will, 13, 133.

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Perspective in drawing, 7, 315.

Perspiration, 1, 296.

Perth.—(1) A midland county of Scotland; famous for its scenery and its historical associations. (2) The capital of county of Perth; manufactures cotton goods. James I. was murdered here, 1437.

Perth Amboy.—A seaport and city in Middlesex Co., N. J. Manufactures terra-cotta, firebricks, etc. Pop. (1900), 17,699.

Pertussis, or Whooping-cough, 1, 349.

Peru.—A republic of South America, lying on the Pacific coast a short distance south of the equator. It is traversed by several ranges of the Andes Mts. but contains also plains and plateaus; is rich in mineral wealth, especially gold and silver, as well as agricultural products. Capital, Lima. Area, 449,000 sq. miles; pop., 4,609,999.

Peru, Balsam of, 5, 244.

Perugino, 9, 223.

Peruvian bark, 4, 485.

Peseta of Spain, 13, 155.

Peso, Value of, 13, 155.

Peter the Great of Russia, 10, 328; 14, 78.

Establishes forts in Siberia, 11, 26
the Hermit, 10, 257; 14, 19.

Peters, Christian Henry Frederick.—(1813–1890.) A German-American astronomer; discoverer of over 40 asteroids.

Petersburg (Va.), Siege of, 12, 101.

Petioles, 4, 396.

Petition, 11, 396.

Petrarch, Francesco.—(1304–1374.) Italy's greatest lyric poet.

Petrie, W. M. Flinders.—(1853–) An English Egyptologist.

Petroleum and its products, 5, 224.

Boring for oil, 5, 226.

Dry wells, 5, 226.

Flowing wells, 5, 226.

History of the industry, 5, 227.

Machinery for oil well, 5, 225.

Pipe lines, 5, 227.

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Sinking an oil well, 5, 226.

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Pets, Care of, 1, 136.

Canary, 1, 136.

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Cockatoo, 1, 141.

Dog, 1, 144.

Guinea pigs, 1, 154.

Monkey, 1, 153.

Parrot, 1, 140.

Pigeon, 1, 142.

Rabbit, 1, 152.

Squirrel, 1, 153.

Pets, Kindness to, 1, 136.

Pettaquamscut Purchases.—In 1660 a tract of land, now Washington Co., R. I., adjoining Pettaquamscut Rock, was purchased of the Indians independently by two separate companies. The conflicting claims ultimately involved R. I. and Conn. in a dispute that lasted 50 years.

Pettie, John.—(1839–1893.) A noted British painter.

Petunia, 5, 71.

Symbolism of, 1, 199.

Phaedra, 10, 110.

Phaedrus, Latin fable writer, 3, 173.

Phalanges or bones of the fingers, 1, 274.
toes, 1, 274.

Phalanx, Macedonian, 10, 207.

Pharaoh, 10, 180.

Palace of, 3, 268.

Story of, 3, 257.

Pharaoh Necho, 10, 184.

Pharisees.—An ancient Hebrew sect which was particularly exact in its interpretation of the law.

Pharmacy, Study of, 13, 404.

Pharos, Lighthouse of, 10, 207.

Pharsalia.—(1) An epic poem by Lucan in ten books, on the civil war between Pompey and Cæsar. (2) In ancient Greece, a district of Thessaly.

Battle of, 10, 221.

Pharyngeal plexus, 1, 284.

Pharynx, 1, 292.

Pheasant, 4, 125, 126.

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Copper, 4, 127.

Eggs of, 4, 119.

Food of, 4, 127.

Golden, 4, 127.

Nest of, 4, 119.

Ring-necked, 4, 127.

shooting, 4, 126.

Silver, 4, 127.

Phelps, Edward John.—(1822–1900.) A jurist and diplomatist; professor of law at Yale, in 1881; U. S. minister to Great Britain (1885–89.)

Phelps, John W., 12, 101.

Phelps, William Walter.—(1839–1894.) An American politician. U. S. minister to Austria (1881–82); minister to Germany (1889–93).

Phenix dactylifera, 5, 1.

Phenol, 5, 243.

Philadelphia.—(1) The largest city of Pennsylvania, called "the City of Brotherly Love"; founded by William Penn, and was the home of Benjamin Franklin; the Continental Congress met here, in 1774. Philadelphia is the

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- second manufacturing city of the country. Pop. (1900), 1,293,697. (2) In ancient geography, a city of Lydia, Asia Minor.
- Philadelphia, Occupation of**, 11, 124.
- "Philadelphia," The**, 11, 227.
- Philbrick, John Dudley.**—(1818-1886.) An American educator; founder of the Quincy system of instruction.
- Philemon and Baucis**, 10, 87.
- Philip.**—One of the twelve apostles of whom nothing is known after The Ascension.
- Philip II.**—(382-336 B. C.) King of Macedon; father of Alexander the Great, 10, 202.
- Philip III.**—Assassinated, 317 B. C. Illegitimate son of Philip II. Made king of Macedon 323.
- Philip IV.**—King of Macedon, son of Cassander. Reigned for a few months only, 297 B. C.
- Philip V.**—(237-179.) Son of Demetrius II. King of Macedon 220-179 B. C.
- Philip I.**—(1053-1108.) King of France 1060-1108.
- Philip II. Augustus.**—(1165-1223.) King of France. Succeeded his father Louis VII. in 1180. He banished the Jews; took part in the third Crusade with Richard the Lion-Hearted, 1190; conquered Normandy, Anjou, Maine, Poitou, and Touraine, 1202-05, 10, 258, 265.
- Philip III.**, "The Bold."—(1245-1285.) King of France. Succeeded his father, Louis IX., 1270.
- Philip IV.**, "The Fair."—(1268-1314.) King of France, 1285-1314, 10, 265.
- Philip V.**, "The Tall."—(1293-1322.) King of France, 1316-22.
- Philip VI.**—(1293-1350.) King of France, 1328-50.
- Philip I.**, "The Handsome."—(1478-1506.) King of the Netherlands, 1482; king of Castile, 1504. Father of Charles I. and Ferdinand I.
- Philip II.**—(1527-1598.) King of Spain, 1556-98, 10, 294, 299, 340.
- Philip III.**—(1578-1621.) King of Spain, 1598-1621.
- Philip IV.**—(1605-1665.) King of Spain, 1621-65.
- Philip V.**—(1683-1746.) King of Spain, 1700-24.
- Philip (MARCUS JULIUS PHILIPPUS)**, "The Arabian."—Roman emperor, 244-249.
- Philip**, "The Bold."—(1342-1404.) Duke of Burgundy. Obtained the duchy of Burgundy, 1363.
- Philip**, "The Good."—(1396-1467.) Duke of Burgundy, son of John the Fearless, whom he succeeded 1419.
- Philip**, "The Magnanimous."—(1504-1567.) Landgrave of Hesse, 1509-67.
- Philip.**—(1177-1208.) Duke of Swabia.
- Philip, John Woodward.**—Born at Kinderhook, N. Y., 1840. An American naval officer.
- Philip, King** (originally METACOMET).—Killed at Mount Hope, R. I., 1676. A noted Indian chief, son of Massasoit.
- Philippi.**—A city of ancient Macedonia. A Christian church was founded here by St. Paul to which he addressed his Epistle to the Philippians.
Battle of, 10, 222.
- Philippics.**—Nine orations by Demosthenes directed against Philip of Macedon. The name is also given to a series of orations by Cicero against Mark Antony delivered 44-43 B. C.

PHILIPPINE ISLANDS.—

An important group of islands in the great archipelago southeast of Asia. They lie between the China Sea and the Pacific Ocean, a little south of Formosa and north of the Dutch East Indies, and extend about 1,000 miles north and south and 600 miles east and west. The number of islands, while not definitely known, is variously estimated at from 1,200 to 2,000, some of which have never been explored. Many of them are very small and uninhabited. New ones are continually being added to the maps. The principal island is Luzon, on which is the city of Manila; the second largest is Mindanao. All the coast lines are cut into many bays, gulfs, isthmuses, and peninsulas. The whole surface is mountainous, the only plains being alluvial districts at the river mouths, and the spaces left by the intersection of the mountain ranges. The general trend of the principal ranges is north and south, with a certain deflection east or west, as the case may be, so that the orographic diagram of the archipelago as a whole bears a resemblance to a fan, with northern Luzon as its center of radiation. The highest peak, Apo, in Mindanao, is over 9,000 feet high. The region is volcanic and active craters are numerous; earthquakes are consequently frequent and violent. In 1627 a high mountain disappeared and in 1675 a great plain emerged from the sea as results of these convulsions. Disturbances of this kind in 1863 and 1880 caused great destruction of property, especially in Manila. The theory of scientists is that the Philippines once formed part of a vast continent, in which the Polynesian Islands, New Zealand, and the Ladrone and Sandwich Islands were also included. Under the Spanish Government the islands

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Philippine Islands — *Continued.*

were closed to foreign commerce, and little is therefore known of the numerous good harbors they contain. The Bay of Manila is one of the finest harbors in the world, with its 120 miles of circumference and its practical freedom from dangers to navigation.

A variety of climate is to be found in the Philippines, on account of the extreme length of the group from north to south, but the general characteristics are tropical. In the region of Manila the hottest season is from March to June, the greatest heat being in May, before the rains set in, when the maximum temperature ranges from 80° to 100° in the shade. The coolest weather is in Dec. and Jan., when the temperature falls at night to 60° or 65° and seldom rises in the day above 75°. From Nov. to Feb. the sky is bright, the atmosphere dry and cool, and the weather in every way delightful. The gales of the Philippines occur chiefly in the northern islands, coming from the northward. Typhoons have their origin to the east or southeast of the Philippines; whence their general course is westward. They occur in all months, but most frequently about the time of the equinoxes. The population has been estimated at 8,000,000, the bulk of which is of Malay origin. There is little record of their early history and they have few traditions. They are skilled in weaving cotton and silk, and they tan leather and make rude wagons. Although the soil is extremely fertile, agriculture is almost wholly undeveloped. The islands are very rich in useful vegetation. Valuable woods such as ebony, cedar, ironwood, sapanwood, and logwood; gum trees; cocoa palms of which trunk, branches, leaves, fruit, shell, and husk all have their use; bamboo and areca palm; banava and malave woods, which resist the destructive action of water for centuries; plants of medicinal virtue, mangoes, plantains, jack fruits, and the Malayan fruits,—all these are abundant. Rice is a staple food but the crop is often insufficient for the demand. In the higher districts potatoes, peas, and even wheat are raised. The most useful of the animals are the deer, the buffalo,—which is the beast of burden,—and the wild horse, small but sturdy and strong. The bull, of Spanish origin, is found wild. Monkeys, mountain cats, huge and deadly reptiles, many species of tropical birds, sharks, and alligators are plentiful. Gold, rich deposits of copper, galena and zinc blends, and sulphur are found. Iron ore is abundant, but on account of the lack of means of transportation and

machinery, it has so far been cheaper to depend upon importation.

It was not until 1809 that the first English firm obtained permission from Spain to establish a business house in Manila, and only since 1834 has there been sufficient freedom of intercourse and introduction of foreign capital to materially effect the development of natural resources. Lack of facilities for transportation hinders internal commerce as well as foreign trade. The only railroad, 123 miles in length, connects Manila with the rice-growing districts. The chief exports are tobacco, manila hemp, sugar, coffee, and cacao; the imports are chiefly rice, flour, dress goods, wines, coal, and petroleum. A variety of textile fabrics, hats, mats, baskets, ropes, and coarse pottery are manufactured. The Philippines were discovered by Magellan in 1521, and from that year until 1542 several attempts were made by Spain to take possession of the islands, but all failed. In 1564 an expedition commanded by Miguel de Lagaspi established a footing in Cebu. The group then received its name in honor of Philip II. of Spain. Headquarters were later transferred to Luzon, and in 1571 the city of Manila was founded. These islands were, in many respects, Spain's most valuable possessions. The Portuguese, Dutch, and Chinese made various unsuccessful attempts to drive out the Spaniards. In 1762 Manila was captured by the English and held for a ransom of £1,000,000. This was never paid and the conquered territory was finally returned to Spain. The government of the Philippines was administered by a Council of State at Madrid, which had in charge the interests of the colony and acted as advisory board to the minister for the colony, and by a governor-general at Manila. The Roman Catholic was the established church, and the various religious orders—Dominicans, Augustines, Franciscans, etc.—were the real rulers of the country, as their power among the natives far exceeded that of the civil and military authorities. This influence was the cause of great jealousy and bitter controversies between the latter and the church. Religious affairs and education are far behind the age. Although in nearly every town and village under the control of the Spanish Government a school might be found, the instruction given was poor in both quality and quantity. The treaty of peace at the close of the Spanish-American War provided for the cession of the entire Philippine group to the U. S., on payment of \$20,000,000 by the latter, and these terms were complied with by both governments. Many of the inhabitants

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Philippine Islands — *Continued.*

of the archipelago desired independence and under the leadership of Aguinaldo, rebelled against the authority of the U. S. The latter found it necessary to send to the Philippines more than 60,000 soldiers, regulars and volunteers, to suppress the insurrection. For nearly three years a desultory war was conducted, resulting in considerable losses on both sides. The Filipinos, as the natives are called, conducted a guerrilla warfare, the hostiles being divided into bands which found refuge in the swamps and among the mountains, whence they sallied forth to harass bodies of U. S. troops. The service of the latter was very severe and onerous and many of the soldiers died from diseases incident to climatic conditions to which they were unaccustomed. The capture of Aguinaldo (see AGUINALDO) early in 1901, was followed by the surrender of many of the insurgent leaders. Civil governments are being established under the direction of a commission appointed by the President, American capital is seeking investment there, schools are rapidly being established with teachers from the U. S., missionaries of all denominations are sowing gospel seed on the islands, and there is every reason to believe that a wondrous change will be wrought by the civilization of the 20th century. (For glossary of Philippine words see WORDS AND PHRASES OF FOREIGN LANGUAGES.)

Philippine Islands, Bats of the, 4, 63.

weaver-bird, 4, 199.

Philippines, Admiral Legaspi's Conquest of, 11, 15.

Surrendered to the United States, 11, 30.
terms explained, 13, 326.

United States in the, 11, 30.

Philistines.—A Semetic (?) nation dwelling in Philistia. Their greatest power was attained during the reigns of Saul and David.

Phillips, Adelaide.—(1833-1882.) An American contralto singer.

Phillips, John.—(1719-1795.) A merchant, founder of Phillips Academy in Exeter, and one of the founders of Phillips Academy in Andover.

Phillips, Samuel.—(1751-1802.) An American politician, judge, and merchant.

Phillips, Wendell.—Orator and philanthropist, 14, 26, 226.

Phillipsburg.—A city in N. J., on the Delaware River. Pop. (1900), 10,052.

Philopœmen, 10, 207.

Philosopher and the pheasants, English fable, 3, 197.

Philosophers' Stone.—An error of ancient science through which it was believed that there was a substance which could convert all base metals into gold.

Philosophy, Chaldean, 10, 53.

Phips, William, 14, 49.

Phlegethon, 10, 102.

Phlox Drumondii, 5, 71.

Phocion, 10, 207.

Phœbe flycatcher, 4, 197.

Phœnicia.—A border of land on the coast of southern Syria, between Mount Lebanon and the Mediterranean Sea; about 200 miles in length; area, about 41,000 sq. miles.

Colonies of, 10, 185.

History of, 10, 185.

Mythology of, 10, 79.

Pottery of, 1, 216.

Religion introduced among the Jews, 10, 82.

Phoenix.—A marvelous bird of ancient Oriental mythology, which died upon a funeral pile of its own building and arose from the ashes with renewed youth.

Phoenix.—The capital of Arizona. Pop. (1900), 5,544.

Phoenix, John.—The pseudonym of George Horatio Derby. He was a well-known humorist.

Phoenixville.—A borough in the township of Schuylkill, Chester Co., Pa., noted for its iron works. Pop. (1900), 9,196.

Phoenix Park Murder, 10, 383.

Phoma uvicola, 5, 97.

Phonograph, 5, 394.

Phosphates of lime, 5, 209.

Phosphoric acid, 5, 197.

Phosphorus.—Although never found naturally in an uncombined state, phosphorus is one of the most widely distributed of elements. The majority of minerals composing the earth's crust contain some proportion, be it ever so small, of phosphorus compounds, and these, on the disintegration of the rocks, find their way into the soil to whose fertility they are essential. No plants, it is found, will grow satisfactorily in the absence of phosphorus; and the substance is equally necessary to the development of animal life, being found in the blood and soft tissues, as well as in the bones, whose rigidity is due to the presence of phosphate of lime. Bone ash, indeed, is the chief commercial source of the common phosphorus which comes into the market as a yellowish waxy looking solid. This yellow phosphorus is very inflammable, and must be handled with the greatest caution as it is easily ignited at ordinary tem-

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- peratures by mere friction, causing dangerous burns. Exposed to the air it undergoes slow combustion and appears faintly luminous, emitting poisonous fumes with a garlicky odor. Heated to about 240° C. out of contact with air, yellow phosphorus is converted into a chocolate red modification which is neither luminous nor poisonous, though chemically unaltered. Common phosphorus is very poisonous, less than two grains have proved fatal, and sets up gastric disorders, jaundice, paralysis, and delirium. A copper sulphate emetic, and French oil of turpentine are useful antidotes. In the manufacture of phosphorus, largely carried on under water, there is apparently little danger to health; but the fumes of phosphorus used in match-making are most injurious to the workers, causing the bone disease known as "phossy jaw." The symptoms rarely appear until the worker has been engaged in the industry for some time; and the medical officer to the Marseilles match factories describes a species of chronic phosphorism in which the workers become so impregnated with phosphorus that the peculiar odor hangs about them and escapes with their breath. With the red phosphorus used for safety matches none of these risks are run, 5, 193.
- Phosphorus.**—(1) In Greek legend the morning star; the name of the planet Venus when seen at early dawn. (2) In Arthurian legend, a name given to Sir Persaunt of India. In Tennyson's "Gareth and Lynette" he is called Morning Star.
- Phosphorus friction matches,** 5, 194.
- Phosphuretted hydrogen,** 5, 197.
- Photography,** Amateur, 6, 355.
 An occupation for women, 7, 388.
 Chemistry of, 5, 213.
 Counting the stars by, 5, 305.
 Developers, 5, 213.
 Silver bromide, 5, 213.
- Photosphere of the sun,** 5, 119.
- Phraortes,** 10, 186.
- Phrygia.**—An ancient country of Asia Minor, comprising, in the Persian period, Lesser Phrygia on the Hellespont, and Great Phrygia in the interior.
- Phryxus and Hellene,** 10, 108.
- Phylloxera,** 4, 358.
- Physical aspects of girls' education,** 2, 442.
- Physical training,** 6, 21.
 Abdomen, Exercises for the, 6, 24.
 Arms and shoulders, Exercises, 6, 21.
 Arms, trunk, and legs, Exercises for, 6, 23.
 Bar, The Horizontal, 6, 38.
 Breathing exercises, 6, 26.
- Physical training — Continued.**
 Chairs, Exercises with, 6, 37.
 Chest weights, 6, 30.
 Clubs, Indian, 6, 26.
 Dumb-bells, 6, 28.
 Educational value of, 6, 17.
 for weak children, 2, 251.
 Grasshopper jumps, 6, 24.
 Horizontal bar, 6, 38.
 Indian clubs, 6, 26.
 Legs, Exercises for, 6, 22.
 Movements, General, 6, 21.
 Neck, Exercises for, 6, 22.
 Pole or rope, Vertical, 6, 44.
 Poles, Double inclined, 6, 41.
 Running on place, 6, 24.
 teaches courage, 6, 18.
 Self-confidence, 6, 18.
 Trunk, Exercises for the, 6, 22.
 Wand, The, 6, 32.
- Physical weakness** of children, 2, 246.
- Physician,** a profession for women, 7, 321.
 First woman admitted to practice in America, 7, 321.
 Studies necessary for a, 7, 321.
- Physick, Philip Syng.**—(1768-1837.) A surgeon and physician, sometimes called "The Father of American Surgery."
- Physics,** 5, 252.
- Physiology,** a study for girls, 2, 435.
- Phytophthora infestans,** 5, 97.
- Piano,** How to gain control of the, 9, 194.
- Piano-playing,** The hand in, 9, 190.
- Piano-practice,** Dangers of, 9, 185.
 Proper method of, 9, 190.
 Value of Bach in, 9, 193.
- Piano-teaching,** Beginner, 9, 196.
 Dissonance, 9, 198.
 Minor music, 9, 200.
- Piano technique,** 9, 190.
 Mechanical playing, 9, 190.
 What is? 9, 189.
- Piano-tuning,** an occupation for women, 7, 394.
- Piaster of Turkey,** 13, 155.
- Piatt, Donn.**—(1819-1891.) An American journalist.
- Picea alba,** 4, 414.
 canadensis, 4, 414.
 nigra, 4, 415.
 rubens, 4, 416.
- Pici,** a class of birds, 4, 103.
- Pickens, Andrew,** 11, 124.
- Pickens, Francis Wilkinson.**—(1805-1869.) A Democratic politician, grandson of Andrew Pickens. He was a member of Congress from S. C. (1834-43); U. S. minister to Russia (1858-60); governor of S. C. (1861-62); was promi-

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- nent as a Secessionist leader at the beginning of the Civil War.
- Pickens, Israel.**—(1780-1827.) A politician. Democratic member of Congress from N. C. (1811-17); gov. of Ala. (1821-25); U. S. senator 1826.
- Pickerel, The, 4, 298.**
 Brook or pond, 4, 299.
 Chain, 4, 299.
 Fishing for, 4, 299.
 Flesh of, 4, 300.
 Habits of, 4, 299.
 Home of, 4, 299.
- Pickering, Charles.**—(1805-1878.) A naturalist, grandson of Timothy Pickering. His works include "Races of Man and Their Geographical Distribution," "Geographical Distribution of Animals and Man," "Geographical Distribution of Plants."
- Pickering, Edward Charles.**—Born at Boston, 1846. An astronomer and physicist, great grandson of Timothy Pickering. He was graduated from Harvard in 1865; was professor of physics at the Mass. Institute of Technology (1868-77), has been professor of astronomy and geodesy, and director of the observatory at Harvard since 1876; has published "Elements of Physical Manipulation," etc.
- Pickering, John.**—(1777-1846.) A philologist, son of Timothy Pickering. His works include "Vocabulary of Americanisms," a Greek English lexicon, "Remarks on the Indian Languages of North America," etc.
- Pickering, Judge John, 12, 305.**
- Pickering, Timothy, 11, 125.**
- Pickett, Albert James.**—Born in Anson Co., N. C., 1810; died at Montgomery, Ala., 1858. A historian, author of "A History of Alabama," etc.
- Pickett, George Edward, 12, 102.**
 Charge of, 12, 4.
- Pickling and preserving,** an occupation for women, 7, 424.
- Pickney, Henry Laurens.**—Born at Charleston, S. C., 1794; died there, 1863. A politician, journalist, and writer; son of Charles Pickney. He was Democratic member of Congress from S. C. (1833-37); founded the Charleston "Mercury" in 1819, and was for a long time its editor.
- Picknicking, 1, 58.**
 Selection of food, 1, 60.
 guests, 1, 59.
 Suitable places for, 1, 59.
- Picotée pink, 5, 71.**
- Picts and Scots, 10, 236.**
- Picture frames, 7, 235.**
- Picture Galleries, 9, 335.**
- Picture pasting, 2, 420.**
 sewing, 2, 419.
- Pictured Rocks.**—A group of cliffs in the upper peninsula of Mich. situated on Lake Superior.
- Pictures, Cutting out, 2, 420.**
 for the dining-room, 1, 16.
 library, 1, 15.
 nursery, 1, 22.
 parlor, 1, 13.
 How to hang, 1, 13.
 study, 9, 335.
 in hall decoration, 1, 12.
- Piedmont Region.**—A name given in several states of the Atlantic Slope to the hilly territory, lying east and southeast of the Appalachian chain, as the Piedmont Region of N. C., Ga., etc.
- Pierce, Franklin.**—Fourteenth President; sketch of, 11, 320; 14, 159.
- Pierce, Rice A., 12, 102.**
- Pierre.**—A capital of South Dakota, in the center of the state at the union of Bad River with the Missouri. Pop. (1900), 2,306.
- Pig, The, 4, 25.**
 Breeds of, 4, 25.
 Characteristics of, 4, 25.
 Pork-packing, 4, 25.
 Products from the, 4, 25.
- Pigeon, 4, 111.**
 Care of, 1, 142.
 Carrier, 4, 111.
 Eggs of, 4, 119.
 Fantail, 4, 112.
 Food for, 1, 142.
 Homing, 1, 142; 4, 111.
 House for, 1, 142.
 Nest of, 4, 119.
 Passenger, 4, 111.
 Pouter, 4, 112.
 Tumbler, 4, 112.
- Pigeon and The Painting,** Turkish fable, 3, 183
- Pig iron, 5, 218.**
- Pignut, 4, 450.**
- Pike, 4, 298.**
 Characteristics of the, 4, 298.
 Flesh of the, 4, 300.
 Food of the, 4, 299.
 Geographical range of, 4, 298.
 Grass pike, 4, 305.
 Greediness of, 4, 299.
 Sand pike, 4, 305.
 Spawning of, 4, 299.
 True, 4, 299.
 Wall-eyed, 4, 305.
 White Salmon, 4, 305.
- Pike, Albert, 12, 102.**

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Pike, Austin Franklin.—(1819-1886.) A politician, Republican member of Congress from N. H. (1873-75), and U. S. senator (1883-86).

Pike, Zebulon-Montgomery, 11, 257.

Pike's Peak.—One of the highest peaks of the Rocky Mountains, situated in Colorado, 70 miles southwest of Denver. Height, 14,147 ft.

Pilgrim Fathers, 11, 44.

Covenant of the, 11, 51.

Pillow, Gideon Johnson, 12, 103.

Pilnitz, Convention of, 10, 344.

Pinakothek, 9, 272.

Pinchback, Pinckney Benton Stewart, 12, 350.

Pinchbeck, 5, 211.

Pinckney, Charles.—(1758-1824.) A politician.

He was a member of the Constitutional Convention in 1787; gov. of S. C. (1789-92, 1796-98, and 1806-08); U. S. senator (1798-1801); U. S. minister to Spain (1802-55); member of Congress (1819-21).

Pinckney, Charles Cotesworth, 11, 125.

Pinckney, Thomas, 11, 125.

Pindar.—(522-443 B. C.) The greatest of the Greek lyric poets.

Pine, The, 4, 413.

Canadian, 4, 414.

Georgia, 4, 414.

Giant, 4, 414.

Jersey, 4, 414.

Long-leaved, 4, 414.

Oregon, 4, 413.

Pitch, 4, 414.

Red, 4, 414.

Scrub, 4, 414.

siskin, 4, 184.

Sugar, 4, 414.

Symbolism of, 4, 414.

Pineapple, 4, 481.

Pine Bluff.—The capital of Jeff. Co., Ark., on the Arkansas River. It exports cotton. Pop. (1900), 11,496.

Pine-finch 4, 184.

Pine Islands.—A group of the Florida Keys, situated northeast of Key West.

Pine tree money, 13, 164.

Pine warbler, 4, 186.

Pines, Isle of.—An island of the West Indies, situated forty miles south of western Cuba. Area, 1,214 sq. miles.

PINES AND THEIR PRODUCTS.—

Southern United States of America produces, in the famous pine trees of that region, what is regarded as the most important timber of commerce. The state of Georgia has given its name to the tree grown extensively within its borders, and no other timber is so largely used in the building of ships, and other struc-

tures. The other pines of the South differ somewhat in growth, but all produce famous timber and nearly all of them are productive of spirits of turpentine.

The pines of the South are commonly known as the longleaf, shortleaf, loblolly, and the Cuban pines. The first two are the most important. Large forests of the tree spread over great areas of the adaptable sandy bottom lands of the states along the southern Atlantic seaboard and as far west as the Mississippi River. The trees often attain a height of more than 100 feet, and sometimes live for three hundred years.

Owing to the variety of local names given to the trees of the different species there is sometimes much confusion regarding them. The longleaf is the common name of the most noted pine tree, the botanical name of which is *pinus palustris*; *pinus echinata* is known as the shortleaf pine; *pinus taeda* is the loblolly pine, and *pinus heterophylla* is the Cuban pine. The local names for the longleaf pine are: southern yellow, southern pitch, hard, heart, pitch, longleaf yellow, longleaf, longleafed pitch, longstraw, North Carolina pitch, Georgia yellow, Georgia heart, Georgia longleafed, Georgia pitch, Florida yellow, Florida, Florida longleafed, Texas yellow, and Texas longleafed pine.

The local names for the shortleafed pine in various parts of the South are yellow, North Carolina slash, oldfield, bull, spruce, and rosemary pine.

The loblolly pine is locally known in several states as slash, loblolly, oldfield, rosemary shortleafed, bull, Virginia, sap, meadow, cornstalk, black, foxtail, Indian, spruce, bastard, yellow, swamp, and longstraw pine.

The Cuban pine is in some states known as the slash, swamp, bastard, meadow, and the pitch pine.

The longleaf pine varies in color from a dark reddish-yellow to reddish-brown. It produces an abundance of resin. The Cuban pine is of a dark straw color and is also resinous. The shortleafed pine varies from whitish, to reddish, brown in color, and the loblolly is yellowish to reddish, and orange-brown. The wood of the longleaf, and Cuban, pines are about equal in strength, the longleaf excelling, however, in its fine grain and smaller proportion of sapwood.

The heaviest wood in the longleaf, and the Cuban pines is formed between the ages of fifteen and one hundred and twenty years. In the shortest-lived loblolly, and shortleafed pines, the period for the formation of the heavi-

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Pines and their Products — *Continued.*

est wood is between the ages of fifteen and eighty years. The longleaf pine, the largest of all Pine trees, attains a height averaging one hundred feet and a diameter, when fully grown, of between twenty and thirty-six inches, at three or four feet from the ground. Its stout limbs are rarely over twenty feet in length, twisted, gnarled, and sparingly branched.

Besides its timber the pine tree is valuable for the production of what are best known collectively, as naval stores. These include resin, or crude turpentine, spirits of turpentine, rosin, pine, and common pitch. At the beginning of the 20th century, the bulk of these stores used in the world was derived from the longleaf pine, the proportion contributed by France, Austria, and other countries, being insignificant. The crude turpentine is obtained by cutting into the tree at a point about one foot from the ground. A sort of box is formed in the wood when first the bark has been removed, and from a point a few inches above the ground, the liquid, of a pale straw color, exudes and drips down into the box, the capacity of which is about three pints. The best turpentine is obtained during the first year after the tapping of the tree. This is known as "Virgin dip" or "soft white gum." In the following year the product is of a deeper color, and becomes the "yellow dip." With each succeeding year the turpentine becomes poorer in volatile oil. Toward the close of the season, the resin becomes hardened under the influence of a cooler temperature and through the partial evaporation of its volatile constituents. The solidified resin, called hard gum, or scrape, contains only half the quantity of spirits of turpentine obtained from the dip or soft gum. By the distillation of crude turpentine the most important naval stores are obtained.

Spirits of turpentine, or oil of turpentine, is the volatile constituent of the resin. This liquid when freshly prepared is colorless, of a peculiar odor and taste and highly inflammable. It is used in the preparation of varnish and paints, and in the rubber industry, and for other purposes.

Rosin or colophony, is the solid constituent of the crude turpentine, remaining after the distillation of the latter. Rosin is brittle, easily powdered, glossy on surface, almost tasteless, and is used in preparations of common varnishes. It is also combined with tallow for the manufacture of candles and in valuable numerous other ways.

Pine tar is produced by the destructive distillation of the wood itself. It is made chiefly

in North Carolina, where the industry has been carried on since earliest colonial times. Small quantities are produced in other sections of the southern pine belt, but mostly for home consumption. In order to extract the tar from the pine-leaf variety, dead limbs and trunks seasoned on the stump, from which the sapwood has been rotted, are cut into suitable billets and piled into a conical stack in a circular pit, lined with clay. The center of the pit communicates by means of a depressed channel with a receptacle—a hole in the ground—at a distance of four feet from the pile of wood. The latter is covered with sod and earth, and is otherwise treated as is a charcoal pit, being fired from apertures at the base, giving only enough draft to maintain slow, smoldering combustion. After the ninth day, the tar begins to flow. This continues for several weeks. It is dipped from the pit into barrels. One cord of "dry," "fat," or light wood furnishes from forty to fifty gallons of tar.

Tar is much used on the rigging of vessels and in many other ways both on land and on shipboard. The best quality of common pitch is obtained by boiling tar until it has lost about one-third or more of its weight. To the naval pitch of commerce there is added a certain proportion of rosin of the lowest grade. Pitch is also obtained through the dry distillation of rosin for rosin oil.

Pine-tree State.—The state of Maine; so-called from the pine-tree in its coat of arms.

Ping Pong.—A game, the rules of which are practically those of lawn tennis; it is played on a table divided by a six-inch net, but without courts. The racquet is a small battledore, which in serving must be held below the table; otherwise its movements are unrestricted, save that no volleying is allowed.

The game can be played on a dining-room table of any size; 9 feet by 5 feet is the official measurement, but you can have just as much fun on a table either larger or smaller.

The height of the net is $6\frac{3}{4}$ inches. The height of the table from the floor should be 2 feet 6 inches.

The posts should stand out 5 inches on the outside of the table. The table should be painted dark green, with a $\frac{3}{4}$ -inch white line around the edges.

RULES.

The game is for two players. They shall stand one at each end of the table. The player who first delivers the ball shall be called the server, and the other the striker-out.

At the end of the first game, the striker-out shall become the server, and the server shall

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become the striker-out, and so on alternately.

The service shall be strictly underhand and delivered from behind the end of the table.

The ball served must drop anywhere on the table-top beyond the net, and is then in play. If it drop into the net or off the table it counts to the striker-out. *There is no second service, as in Lawn Tennis.*

In serving it is a let if the ball touch the net in passing over.

If the ball in play strikes any object above or round the table before it bounces on the table-top itself (net or post excepted) it counts against the player.

The server wins a stroke if a striker-out fails to return the service, or return the service or ball in play off the table.

The striker-out wins a stroke if the server serve a fault, or fails to return the ball in play, or return the ball in play so that it falls off the table.

No volleying is allowed; but as long as the ball touches the table-top it is in play, and can be taken at half volley. The striker-out loses a point if he takes the ball on the volley.

On either player winning his first stroke, the score is called 15 for that player; on either player winning his second stroke the score is called 30 for that player; on either player winning his third stroke, the score is called 40 for that player; and the fourth stroke won by either player is scored Game for that player except as below.

If both players have won three strokes (40 all), the score is called deuce; and the next stroke won by either player is scored advantage to that player. If the same player win the next stroke, he wins the Game; if he loses the next stroke the score is again called deuce, and so on, until either player wins the two strokes immediately following the score of deuce, when the Game is scored for that player.

The player who first wins six games wins a set.

The Game may also be scored by points, twenty up. The players, in this case, change the service after every five points scored, like "overs" at Cricket, and they set three at (19 all) the players who first wins three strokes, winning the game. Best of three games count.

Pingree, Hazen S., 12, 350; 13, 259.

Ping Yang, Battle of, 10, 163.

Pink, 5, 71.

Pheasant's-eye, 5, 71.

Ring-marked, 5, 71.

Pinkham Notch.—A pass in the White Moun-

tains of New Hampshire, leading from the Glen House southward.

Pinkney, Edward Coate.—(1802-1828.) A poet, son of William Pinkney, author of "Rodolph and Other Poems," etc.

Pinkney, William.—(1764-1822.) A lawyer, politician, and diplomatist. He was minister to Great Britain (1806-11); attorney-general (1811-14); member of Congress from Maryland (1815-16); minister to Naples, 1816, to Russia (1816-18), and U. S. senator (1820-22).

Pins.—Pins date to 1543 in France and were made in England in 1626. Before that time they used thorns and clasps in place of pins.

Pinus, 4, 413.

lambertiana, 4, 414.

palustris, 4, 414.

resinosa, 4, 414.

rigida, 4, 414.

Virginiana, 4, 414.

Pioneer's Day, 13, 99.

Pipe-fish, 4, 282.

Habits of, 4, 282.

Reproduction of, 4, 282.

Pipe lines for conveying oil, 5, 227.

Pipsissewa, 5, 14.

Piracy, 12, 350.

Piraeus, 10, 196.

Pisano, Andrea.—(1270-1349.) Noted Italian sculptor.

Pisano, Giovanni.—(1240-1320.) Italian architect and sculptor.

Pisano, Niccola.—(1205-1278.) Famous Italian sculptor and architect.

Piscataqua.—A river in N. H., formed by the union of the Salmon and Cocheco rivers.

Pisces (The Fishes), 5, 145.

Pisiform bone, 1, 274.

Pisistratus, 10, 194.

Pistil, 5, 11.

Pistole, 13, 164.

Pitcairn's Island.—"An island in the southern Pacific; discovered in 1767. It is under the protection of New South Wales.

Pitchblende, 5, 222.

Pitcher, Molly, 11, 125.

Pitcher-plant, 5, 20.

Pitkin, Timothy.—(1766-1847.) A lawyer, politician, and historian. His writings include "Statistical View of the Commerce of the U. S.," "A Political and Civil History of the U. S. from the Year 1763 to the Close of Washington's Administration."

Pitman, Isaac.—(1813-1897.) Inventor of "Pitman's system of Phonography."

Pitt, William.—(1759-1806.) Celebrated Eng-

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- lish statesman, sometimes called "The Great Commoner," 10, 338; 14, 23, 178.
- Pittsburg.**—The capital of Allegheny Co., Pa., at the junction of Monongahela and Allegheny rivers. It is the second city in the state and one of the chief manufacturing cities of the country. The principal manufactures are iron, steel, glass, copper, brass, flour, machinery, and petroleum. It exports coal, coke, etc., and is an important railway center. Pop. (1900), 321,616.
- Pittsburg Landing, Battle of.**—See SHILOH, BATTLE OF.
- Pittsfield.**—The capital of Berkshire Co., Mass. It has manufactures of woolen and cotton goods, silks, tacks, etc. Pop. (1900), 21,766.
- Pittston.**—A borough in Luzerne Co., Pa., on the Susquehanna River; important as a place of export for anthracite coal. Pop. (1900), 12,566.
- Pius IV., Creed of,** 10, 298.
- Pius VIII., Death of,** 11, 1.
- Pius IX., Election of,** 11, 2.
- Pizarro, Francisco.**—(1471-1541.) A Spanish soldier. The conqueror of Peru, 11, 39.
begins conquest of Peru, 11, 39.
Death of, 11, 39.
Voyages of, 11, 39.
- Place de la Bastille.**—A square at the end of Rue St.-Antoine, Paris, which derives its name from the celebrated prison formerly standing there.
- Place de la Concorde.**—A noted square in Paris, formerly called the Place de la Guillotine.
- Placer-mining of gold,** 5, 223.
- Placide, Henry.**—(1799-1870.) A noted American actor.
- Placidia,** 10, 402.
- Plague, The great,** 10, 326.
- Plaice,** 4, 274.
- Planets,** 5, 110, 129.
Fixed stars and, 5, 129.
- Plantagenets.**—A line of English monarchs from Henry II. (1154) to Richard II. (1399). The name is derived from the common broom of Anjou (the *planta genista*), a sprig of which Geoffrey, father of Henry II., used to wear in his helmet. During the rule of the Plantagenets the Commons wrested from the Crown many practical reforms, and received many concessions in the interest of the people. The right of Parliament to inquire into public abuses, and to impeach public counselors, were among the privileges granted at this period, 1, 201.
- Plantain, The** (see BANANA), 5, 72.
fruit, 4, 480.
- Plants, Acaulescent,** 4, 395.
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Breathing of, 4, 393.
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Flowers of, 4, 397.
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Introduction to, 4, 385.
Leaves of, 4, 396.
Organs of, 4, 394.
Preservation of, 4, 399.
Pressing and drying, 4, 401.
Proper method of examining, 4, 385.
Relation to light, 4, 390.
Reproductive organs of, 4, 397.
Roots, 4, 394.
Seeds, 4, 397.
Skin of, 4, 393.
Studied in connection with drought, 4, 390.
Study of forest society, 4, 386.
Underground habit of, 4, 388.
Vascular, 4, 392.
- Plassey.**—Once a town in the province of Bengal, which laid the foundation for British supremacy in India.
- Plaster of Paris.**—Native gypsum; so-called because found in large quantities in the Tertiary of the Paris basin, 5, 445.
- Plata, Rio de la.**—In South America; a large estuary between Uruguay and the Argentine Republic.
- Platæa.**—An ancient Grecian city near Thebes, in the western part of Bœotia.
Battle of, 10, 188, 199.
- Platanoides,** 4, 407.
- Plate glass insurance,** 13, 187.
- Platform,** 11, 396.
- Platinum,** group of chemical elements, 5, 223.
Properties of, 5, 223.
Source of, 5, 223.
- Platipus, Duck-billed,** 4, 47.
Eggs of, 4, 48.
- Plato.**—(427-347 B. C.)—Famous Greek philosopher.
- Platt, Charles A.**—Born at New York, 1861; a landscape-painter and etcher.
- Platt, Thomas Collier.**—Born at Oswego, N. Y., 1833. A prominent republican politician, 1, 231.
- Platte, or Nebraska.**—One of the largest tributaries of the Missouri. Total length, 900 miles; not navigable.
- Plattsburg.**—The capital of Clinton Co., N. Y.; situated on Lake Champlain. Pop. (1900), 8,434.
- Plattsburg (N. Y.), Battle of,** 11, 257.

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- Platysma myoides** muscle, 1, 275.
- Play**, Adult interference with, 2, 122.
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 Balloon, 2, 128.
 basis of Froebel's system, 2, 118.
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 Freedom in, 2, 122.
 Froebel on, 2, 120.
 Game of "water-dwellers," 2, 146.
 Garden, 2, 126.
 Highest phase of development, 2, 118.
 House book, 2, 147.
 Kite, 2, 128.
 Magic lantern, 2, 131.
 Mother's sympathy with, 2, 123.
 Mud, 2, 124.
 Paper dolls, 2, 149.
 Post office, 2, 150.
 Sand, 2, 124, 148.
 Soap-bubbles, 2, 129.
 Tools, 2, 147.
 Water, 2, 128.
- Playing**, to music, 2, 132.
 with fire, 2, 130.
- Playfair**, Sir **Lyon**.—(1819-1898.) A British chemist, statesman, and writer on economics.
- Pleasant Grove** (La.), **Battle of**.—See **SABINE CROSS ROADS, BATTLE OF**.
- Pleasant Hill** (La.), **Battle of**, 12, 103.
- Pleasanton**, **Alfred**.—(1823-1897.) Maj-gen. in the Civil War and conspicuous for his bravery and efficiency.
- Plebeians**, 10, 209.
 Secession of, 10, 211.
- Pleiades**, 5, 140; 10, 93.
- Pleiades**, Maori fairy tale, 3, 38.
- Pleisiosaurus**, 5, 465.
- Plethron**, 13, 156.
- Pleurenchyma**, 4, 392.
- Plevna**.—A town in Bulgaria; an important strategic point.
 Battle of, 11, 11.
- Plimsoll**, **Samuel**.—(1824-1898.) An English statesman known as "the sailors' friend." As member of Parliament he secured the passage of the "Merchant Shipping Act," to prevent vessels from going to sea in an unsafe condition. The "Plimsoll's mark" is the mark placed on the outside of the hull of a vessel showing the depth to which it may be loaded.
- Pliny**, "The Elder."—(23-79 A. D.) Celebrated Roman naturalist, 14, 27.
- Pliny**, "The Younger."—(62-113 A. D.) Roman author, nephew of "The Elder" Pliny.
- Pliocene epoch**, 5, 466.
- Pliohippus**, 5, 466.
- Plockhurst**, 9, 327.
- Plombières**, Conference at, 11, 3.
- Plough**, a constellation, 5, 135.
- Plover**, 4, 129.
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- Plum**, Canada, 4, 469.
 Chickasaw, 4, 470.
 tree, 4, 469.
 Wild, 4, 469.
- "**Plumed Knight**," 12, 351.
- Plumbing trade**, 13, 421.
- Plum Island**.—(1) An island belonging to Mass., lying south of the mouth of the Merrimac River. (2) A small island belonging to N. Y., situated near the eastern entrance to Long Island Sound.
- Plumule**, 4, 396.
- Plutarch**.—(Between 50 and 100 A. D.) A celebrated Greek historian.
- Pluto**, 10, 102.
- Plutonic rocks**, 5, 460.
- Pluviose**, 13, 97.
- Plymouth**.—(1) The oldest town of New England. The Pilgrim Fathers landed here, 1620. Pop. (1900), 9,592. (2) The capital of Washington Co., N. C., at the head of Albemarle Sound. (3) A borough in Luzerne Co., Pa., noted for its coal-mining. Pop. (1900), 13,649.
- Plymouth Church**, 8, 276.
- Plymouth Colony**.—The first settlement in Mass. The Pilgrims, sailing from Plymouth, England, in the "Mayflower," landed at Plymouth Rock, Dec. 21, 1620. The colony became a member of the New England Confederation in 1634, and in 1691 it united with Massachusetts Bay colony.
- Plymouth Rock fowl**, 4, 106.
- Pneumogastric nerve**, 1, 284.
- Pneumonia**, Treatment of, 1, 327.
- Po**.—The longest river in Italy; it rises in Monte Viso, one of the Cottian Alps, and flows into the Adriatic Sea. Length, about 400 miles.
- Poa leckonbyi**, 5, 81.
 praetensis, 5, 82.
- Pocahontas**.—An Indian princess celebrated in the history of Virginia. Died at Gravesend, England, 1617, 11, 42.
- Po Chu-i**, Poem of the, 10, 44.
- Pocket-boroughs**, 10, 370.

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- Poe, Edgar Allan**, 8, 310.
 Style of, 8, 379.
- Poetry** and prose compared, 8, 404.
 What there is for the poet, 8, 242.
 Meter of, 8, 406.
 Power of, 8, 512.
- Poets' Corner**.—A portion of the south transept of Westminster Abbey devoted chiefly to memorials of poets.
- Poinsett, Joel Roberts**, 11, 396.
- Pointer dog**, 4, 20.
- Point Pelee, or Point Pelée**.—(1) A headland projecting into Lake Erie from the southwestern part of Ontario, Canada. (2) An island in Lake Erie, near Sandusky, a possession of Canada.
- Poison ivy**, 5, 43.
 Sumach, 4, 433.
 Valley of Java, 5, 154.
- Poitiers**.—A city in western France, capital of the department of Vienne. Its Temple of St. Jean (baptistery) dates from the 6th century. Noted for its cathedral and university.
 Battle of, 10, 266.
- Poitou, Battle of**, 10, 262.
- Pokeweed**, 5, 72.
- Poland**.—Formerly a kingdom of Europe, its territory in the 17th century extending from the Baltic on the northwest nearly to the Black Sea on the southeast. In 1792, 1793, and 1795 it was partitioned between Russia, Prussia, and Austria. In 1815 the kingdom of Poland was created with Warsaw as its capital. Since 1864 it has been a Russian province. Area of Russian Poland, 49,157 sq. miles. Pop., over 8,000,000, 10, 287.
 Russian war with, 10, 363.
- Polar bear**, 4, 35.
- Pole, Cardinal**, 10, 438.
- Pole-cat**.—A quadruped of the weasel family. It is one of the largest of that genus: color deep blackish brown; nose sharp, ears short and round; tail almost equally covered with longish hair.
- Poles, Exercises with**, 6, 41.
 of the celestial sphere, 5, 107.
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- Pole-star, To find the**, 5, 107, 135.
- Policemen, Career of**, 13, 433.
- Policy**, 13, 177.
 of insurance, 13, 186.
- Polish fairy tales**, 3, 46.
 fowl, 4, 106.
- Political assessments**, 12, 197.
 Career, Making a, 12, 445.
- Politician, The true**, 12, 416.
- Politics as a career**, 12, 418.
 Beginnings of American, 11, 49.
- Polk, James Knox**, 11, 308.
- Polk, Leonidas**.—(1806-1864.) A bishop of the Episcopal church and a general in the Confederate army.
- Pollen**, 4, 397; 5, 11.
- Pollock**, 4, 287.
 Eggs of the, 4, 287.
 Habits of the, 4, 287.
 Oil of the, 4, 287.
- Poll tax**, 13, 177.
- Pollux, a star**, 5, 142.
- Polo**, 6, 283.
 Bicycle, 6, 162.
 Ice, 6, 288.
 Roller, 6, 99.
 Water, 6, 105.
- Polo, Marco**.—(1250-1323.) Celebrated Italian traveler.
- Polycrates**.—(6th Century.) The most powerful of the Greek sea kings of antiquity.
- Polymnia**, 10, 92.
- Polynesia**.—The name given to the numerous islands scattered throughout the Southern and Western Pacific.
- Polyp, The**.—See RADIATES.
- Polyphemus**.—In Homeric myth, the most celebrated of the fabulous Cyclops who inhabited the island of Sicily, 3, 378.
- Pombal, Marquis of**, 10, 340.
- Pomegranate**.—A fruit native to the warmer temperate parts of Asia and Africa. It is as large as an orange with a thick leathery rind of a fine golden yellow, 5, 6.
- Pompadour, Marquise de**, 10, 341.
- Pompeii**.—A city in the province of Campania, Italy. It stood at the base of Mount Vesuvius, and was buried 79 A. D. in an eruption of Vesuvius, 10, 227.
- Pompey the Great**.—(106-48 B. C.) Cneius Pompeius Magnus. A famous Roman general.
 takes Jerusalem, 10, 185.
- Ponce de Leon**.—(1460-1521.) Famous Spanish traveler and soldier.
- Pond duck**, 4, 110.
- Pons Varolii**, 1, 283.
- Pontiac**.—A town of Mich. Pop. (1900), 9,769.
- Pontiac's War**.—An uprising, 1763-66, of several Indian tribes led by chief Pontiac, to prevent white settlers from pushing westward. Many forts were taken and their garrisons massacred, but the uprising was not successful.
- Pontifex Maximus**, 10, 259.
- Pony**, 4, 13.
 Shetland, 4, 13.
- Pony polo**, 6, 283.
- Poodle dog**, 4, 21.
 French, 4, 21.

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Poole, William Frederick.—(1821-1894.) A librarian, bibliographer, and historical writer; originator of "Poole's Index to Periodical Literature."

Poore, Benjamin Perley.—(1820-1887.) A journalist and author.

Poor Man and the Eagle, Armenian fable, 3, 178.

"Poor Richard's Almanac."—See FRANKLIN, BENJAMIN, 11, 90.

Pope, Alexander.—(1688-1744.) Eminent English poet.

Pope, Alexander, introduced the weeping willow, 4, 440.

Pope, John, 12, 103.

Pope, The, How he is Elected.—The Cardinals elect the Pope from their own number, and are under lock and key while they do it, hence their assembly is called a Conclave (clavis, a key). The first meeting takes place on the tenth day after the Pope's death. A service and an election sermon begin the day. Then the master of ceremonies, carrying the Papal cross, precedes the Cardinals on their way to the chapel in conclave, where they swear to observe the Apostolic Constitutions. At night, all except the Cardinals have to leave the Palace and the doors are locked. In 1878, 250 people were locked in the Vatican corridors.

The election is by secret ballot on papers. The papers are threefold. One bears the Cardinal's name and another his motto; these are sealed down. The third part bears his nomination, and is the only part visible to the tellers. A two-thirds majority is necessary.

When a selection is made, the dean of the Cardinals addresses the Pope-elect in a loud voice, "Do you accept the election canonically made to the Supreme Pontificate?" If he accepts, the Senior Cardinal Deacon goes outside to the people, and says, "I announce to you a great joy. We have as Pope the Most Eminent and Most Reverend Cardinal of the Holy Roman Church, who has taken the name of —."

The present Pope is Giuseppe Sarto, elected in 1903. He was born near Venice, in 1835, of humble parentage. He was created cardinal in 1893. In the discharge of his duties he won the hearts of all by the modesty and simplicity of his life and his devotion to the poor. He secured fifty-five out of sixty-one votes after six ballots. He is the 258th pope. In the 19th century six popes were chosen.

Pius VII, 1800; Leo, XII, 1823; Pius, VIII, 1829; Gregory XVI, 1831; Pius IX, 1846; Leo XIII, 1878.

Poplar, The, 4, 426.

Balsam, 4, 429.

Poplar—*Continued*

Cottonwood, 4, 428.

Downy-leaved, 4, 427.

Lombardy, 4, 426, 430.

Necklace, 4, 428.

River, 4, 428.

White, 4, 426, 429.

Popliteal nerves, 1, 285.

Popocatepetl.—A volcanic mountain fifty miles southwest of the City of Mexico. Height, 17,540 ft.

Poppy, The, 5, 31.

California, 5, 31.

Corn, 5, 31.

Long-leaved, 5, 31.

Population, 12, 351.

of Europe in 19th Century, 13, 331.

Populists, 12, 349.

Populus alba, 4, 426.

Angulata, 4, 428.

balsamifera, 4, 429.

grandidentata, 4, 427.

heterophylla, 4, 427.

Italica, 4, 426.

monilifera, 4, 428.

nigra, 4, 426.

tremuloides, 4, 426.

Porcelain, Amstel, 1, 222.

Berlin, 1, 222.

Bow, 1, 222.

Budweis, 1, 222.

Caen, 1, 222.

Capodimonte, 1, 222.

Chelsea, 1, 222.

Chinese, 1, 215, 221.

Crackle, 1, 221.

Copenhagen, 1, 222.

Derby, 1, 222.

Dresden ware, 1, 221, 222.

History of the manufacture of, 1, 216.

Hizen, 1, 223.

Limoges, 1, 223.

Lowestoft, 1, 223.

Marks of, 1, 222.

Medici, 1, 223.

Ming dynasty of China, 1, 221.

Royal Worcester, 1, 223.

Sevres ware, 1, 222, 223.

St. Cloud, 1, 221.

Swansea, 1, 223.

Tcheon dynasty, 1, 221.

Vieux Saxe, 1, 222.

Watteau figures, 1, 222.

Worcester, 1, 223.

Porcupine, 4, 69.

Canadian, 4, 70.

Common, 4, 70.

Food of, 4, 70.

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Porcupine — *Continued.*

Habits of, 4, 70.

Home of, 4, 70.

Porson, Richard.—(1759-1808.) England's greatest technical Greek scholar.

Port Arthur.—A port in Manchuria on the Yellow Sea, now leased to Russia, 11, 28.

taken from China by Japan, 10, 163.

Russia by Japan, 10, 178.

Portage City.—On the Wisconsin River; the capital of Columbia Co., Wis. Pop. (1900), 5,459.

Portage Falls.—A cascade 110 feet in height, in the Genesee River.

Portage Lake.—A lake in the upper peninsula of Mich., connected with Keweenaw Bay.

Port-au-Prince.—Capital of the republic of Haiti and chief port of the island, situated on a bay on the western coast. Pop., about 60,000.

Port Gibson (Miss.), Battle of, 12, 108.

Port Hudson (La.), Capture of, 12, 108.

Port Royal (S. C.), Capture of, 12, 108.

Portal Circulation of the blood, 1, 280.

Porter, David Dixon, 12, 104.

Porter, Fitz-John, 12, 108.

Porter, Horace, 12, 184.

Porter, Noah.—(1811-1892.) A noted educator and philosopher.

Portia dura nerve, 1, 284.

PORTO RICO.—

The easternmost island of the Greater Antilles group; lies east of Haiti, between the Atlantic Ocean and the Caribbean Sea. It is the fourth in size but the first in density of population and in prosperity, of the Greater Antilles. Area, 3,688 sq. miles; pop., about 900,000. This is one of the few countries of tropical America where the number of whites exceeds that of the negroes, mulattoes, and other races. In richness of soil and in products, which include cane, coffee, tobacco, and rice, the island resembles Cuba. In the low regions the climate is hot and moist and would in many places be unbearable but for the cooling winds. On the heights of the central Cordilleras the temperature is healthy and agreeable. Iron is so corroded and consumed by the action of the damp air that it is useless, and bronze artillery has to be covered with a thick varnish to protect it. Although the heat, the rains, and the seasons are practically the same in all the West India Islands, the number of mountains and running streams in Porto Rico and the general cultivation of the land contribute to purify the air there and make it the most healthful of them all. As in all tropical countries there are, generally speaking, two

seasons, the dry and the rainy. The rainy season commences in Aug. or Sept. and ends the last of Dec. In Aug. a suffocating heat, unrelieved by breeze, reigns night and day, and this is the most unhealthful season for Europeans. About the middle of Sept. the rain comes in a deluge and in half an hour the whole surface of the land is covered with a sheet of water. In Nov. north winds set in, and when these abate, fine weather and a clear sky succeed. This is the most salubrious season of the year and tourists may visit the country without fear. Fierce hurricanes ravage the island and do great damage but there is always warning of their approach. Earthquakes are frequent, but not destructive, owing to the construction of the buildings. The average altitude of Porto Rico is much less than that of the rest of the Greater Antilles. A great mountain chain running east and west divides the island into two parts, which the natives call Banda del Norte and Banda del Sur, but the whole island may be said to form a continuous network of sierras, hills, and heights. Few countries of equal area have so many streams. Some of the rivers are navigable two or three leagues from their mouths for schooners and small coasting vessels. There are few good roads except the broad pike which starts from the capital and runs along the coast. The Porto Ricans are not sea-going people and take little part in the commercial activity of the place. In 1887 only one-seventh of the pop. could read and write but of late years progress in public instruction has been rapid. Coffee, sugar, cocoanuts, and bananas, are largely exported, and the imports consist chiefly of flour, provisions, wines, textiles, and machinery. There are 307 miles of railway and 470 miles of telegraph. Porto Rico was discovered by Columbus in 1493 and the natives were conquered by Ponce de Leon in 1508-1520. Since that time it has always been under the dominion of Spain until its cession to the U. S. at the close of the Spanish-American war in 1898. The capital, San Juan, was settled in 1511; its pop. is now about 40,000.

Port Republic (Va.), Battle of.—June 9, 1862, Stonewall Jackson defeated the U. S. force under Gen. Shields at Port Republic, in the Shenandoah Valley, Va., inflicting a loss of above 1,000 men.

Port Royal (S. C.), Capture of.—A fleet of over 50 vessels under Commodore Dupont, and a land force of 10,000 men under Gen. Sherman, sailed from Hampton Roads, Oct. 29, 1861, reached Port Royal, Nov. 3, and quickly captured the Confederate stronghold.

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Port Said.—An Egyptian town situated on the junction of the Suez Canal and the Mediterranean Sea.

Portsmouth.—(1) One of the capitals of Rockingham Co., N. H., and the only seaport in the state. It has ship-building interests and is popular as a summer resort. Pop. (1900), 10,637. (2) The capital of Norfolk Co., Va., and the terminus of several steamer lines. Pop. (1900), 17,427. (3) The capital of Scioto Co., Ohio; manufactures and trade. Pop. (1900), 17,870.

Treaty of, 10, 176; 12, 184.

Portugal.—A kingdom in the extreme southwestern part of Europe, lying between Spain and the Atlantic Ocean. The government is a hereditary constitutional monarchy, the Cortes being the legislative power. Capital, Lisbon. Area, 34,038 sq. miles; pop., 5,000,000.

Beginnings of, 10, 285.

Commerce with Japan, 10, 165.

gains independence, 10, 340.

loses carrying trade, 10, 340.

Portuguese fairy tales, 3, 61.

man-of-war, 4, 380.

Poseidon, 10, 98.

Posey, Thomas.—(1750-1818.) An American general and politician; served in the Revolution and Indian Wars.

Position, How to Get and Keep It, 13, 70.

Correct, 2, 412.

Postage currency, 13, 164.

Postage Stamps.—Adhesive stamps, for prepayment of postage, were authorized by the U. S. Government in 1847. The universal postal union was formed in 1874, adopting the rate of 5 cents per $\frac{1}{2}$ oz. on letters passing between the countries composing the union. Stamped envelopes were first issued in the U. S. in 1852, and postal cards in 1872.

When to enclose, 1, 89.

Postal reforms in England, 10, 381.

savings banks, 13, 37.

statistics, 13, 342.

Post-cards, Which Country First Used Them.

—In Austria, where the post-card system was adopted in October, 1869, and proved very popular, eight million cards were sold in the first year. Most of the other European countries rapidly followed suit, Germany introducing them in June, 1870; Switzerland and the United Kingdom in October, 1870; Sweden and Denmark in April, 1871; Belgium in July, 1871; Norway and Russia in January, 1872; while Greece, Italy, Portugal, and Spain also adopted the system in the course of the 'seventies. In this country a million and a half cards were sold the first

week, and the issue has steadily increased year by year, having risen from sixty millions in 1873 to 128,554,800 in 1883, and 244,400,000 in 1893. Reply post-cards were first issued on October 2d, 1882.

Post-glacial epoch, 5, 466.

Posting the ledger, 13, 39.

Post obit, 13, 177.

Post Office department, 12, 397.

money orders, 13, 251.

scandal, 12, 180.

Posture a symptom of illness, 1, 317.

Influence of, 2, 411.

Potash, Chlorate of, in safety matches, 5, 196.

Potassium a means of preparing hydrogen, 5, 158.

Cyanide, 5, 205.

group of chemical elements, 5, 202.

hydrate, 5, 159.

nitrate, 5, 203.

Properties of, 5, 202.

Salts of, 5, 202.

Sources of, 5, 202.

Potato.—One of the most important of cultivated plants; in universal cultivation in all temperate regions of the world. It is a native of the mountainous districts of tropical and subtropical America, probably from Chile to Mexico, 5, 72.

Potato-blight, 5, 97.

Potato-bug.—A beetle destructive to the potato vine; is about three-eighths of an inch long with several longitudinal black stripes upon its back, 4, 349.

Potato-rot, 5, 97.

Potato, Sweet, 5, 76.

Potentilla.—A genus of plants of the natural order *Rosaceæ*. The species are very numerous, all natives of temperate regions.

Potomac, Army of the, 12, 109.

Potomac River.—A river forming the main boundary between Md. on the north, and W. Va. and Va. on the south; it flows into Chesapeake Bay. Length, about 400 miles.

Potsdam.—(1) In Prussia; capital of the government district of Potsdam, a few miles from Berlin. A residence of royalty. Pop., about 55,000. (2) A village in St. Lawrence Co., N. Y., on the Racket River, noted for its sandstone quarries. Pop. (1900), 3,843.

Potter, Henry Codman.—Born at Schenectady, N. Y., 1835. A prominent Protestant Episcopal bishop; he became bishop of New York in 1887, 8, 100.

Potter, Paulus, 9, 315.

Pottery, American, 1, 223.

Bambino plaques, 1, 217.

Barberini vase, 1, 220.

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Pottery—*Continued.*

- Cafaggiolo, 1, 218.
 Della Robbia Majolica ware, 1, 217.
 Delft, 1, 219.
 Earthenware, 1, 215.
 Faïence d'Oiron, 1, 218.
 German, 1, 219.
 Greek, 1, 216.
 Gubbio, 1, 218.
 Hans Kraut, 1, 219.
 Henri deux ware, 1, 218.
 in early Egypt, 1, 216.
 Palissy, 1, 218.
 Phœnician, 1, 216.
 Porcelain, 1, 215.
 Renaissance majolica, 1, 218.
 Roman, 1, 217.
 Saracenic, 1, 217.
 Stoneware, 1, 215, 220.
 Trenton, 1, 224.
 Urbino, 1, 218.
 Veit Hirschvogel, 1, 219.
 Wedgewood, 1, 220.
- Pottstown.**—A borough in Montgomery Co., Pa.; manufacturing interests. Pop. (1900), 13,696.
- Pottsville.**—The capital of Schuylkill Co., Pa., the center of the Schuylkill coal region; pop. (1900), 15,710.
- Poughkeepsie.**—The capital of Dutchess Co., N. Y., trade manufacturing interests. The seat of several educational institutions. Pop. (1900), 24,029.
- Poult, 4, 370.**
- Poultry, Domestic fowl, 4, 105.**
- Pound sterling, 13, 154.**
- Poussin, Gaspar.**—(1613-1675.) A noted French landscape-painter.
- Poussin, Nicholas.**—(1594-1665.) A famous French painter, 9, 261.
- Pout, 4, 307.**
- Pouter pigeon, 4, 112.**
- Poverty no obstacle, 12, 406.**
- Powder, Smokeless, 5, 204.**
- Powderly, Terence V, 12, 351.**
- Powell, J. M., 12, 274.**
- Power, Misuse of, 2, 380.**
 Staying, 8, 257.
 Transmuting knowledge into, 8, 193.
- Powers, Hiram, 9, 411.**
- Powhatan, 11, 42.**
- Poynter, Sir Edward John.**—(1836-) A distinguished English historical painter.
- Pozzuoli.**—In ancient times called Puteoli, a resort of the Roman nobility, a special port of Rome, of great commercial importance. It is situated on the Bay of Naples and is

now noted for the ruins of an immense amphitheater.

- P. P. C., Pour prendre congé, 1, 62.**
- Practical education, 8, 195.**
- Pradier, James, 9, 400.**
- Prado, Museo del, 9, 272.**
- Praed, Winthrop Mackworth.**—(1802-1839.) An English poet noted for his epigrammatic verse.
- Praetor, 10, 210.**
 peregrinus, 10, 210.
 urbanus, 10, 210.
- Prague.**—A prominent commercial city of the Austrian empire, capital of Bohemia. Pop., nearly 200,000.
 Peace of, 11, 7.
- Prairie Chicken, 4, 123.**
- Prairie-dog.**—A species of marmot about the size of a squirrel or large rat, which inhabits the prairies of western North America.
- Prairie Grove (Ark.), Battle of, 12, 109.**
- Prairie-hen, 4, 122.**
 Characteristics of, 4, 122.
 Eggs of the, 4, 117.
 Food of the, 4, 123.
 Nest of the, 4, 116.
 Where found, 4, 122.
- Prairie-lark, 4, 173.**
- Prairie warbler, 4, 186.**
- Prarial, 13, 97.**
- Prasutagus, king of Briton, 10, 398.**
- Pratt, Charles.**—An American philanthropist, founder of Pratt Institute, Brooklyn (1830-91).
- Pratt Institute, Manual training at the, 7, 1.**
- Pratt, Orson.**—(1811-1881.) A prominent missionary and apostle of the Mormon Church. "Preacher," The, 4, 167.
- Préault, 9, 400.**
- Preble, Edward, 11, 228.**
- Precious stones, Symbolism of, 1, 193.**
- Precocious children, 2, 97.**
- Preemption Laws.**—According to the law of 1841, the right was granted to any person over 21 years of age to preempt 160 acres of public land on condition of residence and improvement. Twelve to thirty-three months were allowed for payment. This law was repealed in 1891 and since that time there has been no legislation on the subject.
- Preferred Creditor, 13, 177.**
- Premium.**—A sum beyond par value. The amount paid annually on insurance contracts.
- Prence, Thomas.**—(1601-1673.) A colonist; governor of Plymouth Colony (1634-38) and (1657-73).
- Prentiss, Benjamin Mayberry, 12, 109.**
- Prentiss, Mrs. (ELIZABETH PAYSON).**—(1818-

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- 1878.) An American novelist and writer for children.
- Preparation for motherhood**, 2, 11.
- Pre-Raphaelism**, 9, 286.
- Pre-Raphaelite brotherhood**, 9, 286.
- Prescott**.—A town of Arizona; the center of a gold and silver mining region. Pop. (1900), 3,559.
- Prescott, William**, 11, 125.
- Prescott, William Hickling**, 8, 26, 301.
- Presidents**, How made, 12, 438.
Inauguration of, 12, 444.
Manner of choosing, 12, 438.
Oath of, 12, 346.
- Presidential electors**, 12, 439.
Message, 12, 334.
succession, 12, 351.
- Press, Associated**, 8, 470.
- Preston, Harriet Waters**.—Born at Danvers, Mass., about 1843. An American writer and translator.
- Preston, John Smith**, 12, 109.
- Prevertebral cordia plexus**, 1, 284.
- Preyer on mechanism of speech**, 2, 105.
play-activity, 2, 121.
quoted on walking, 2, 87.
- Preyer's child's attempts to speak**, 2, 107.
- Priam**, 3, 367.
- Priapus**, 10, 105.
- Pribyloff Islands**.—A group of islands in Bering Sea, belonging to Alaska. They are noted for their seal-fisheries.
- Price, Sterling**, 12, 109.
- Prickly heat**, Treatment of, 1, 336.
pear, 5, 72.
- Pride, Colonel**, 10, 322.
- Priestley, Joseph**.—(1733-1804.) An English scientist and theological writer, 14, 95.
- Primary elections**, 12, 440.
- Primates** or man-like mammals, 4, 11.
- Primidi**, 13, 97.
- Primrose**, 5, 72.
- Prince Darling**, French fairy tale, 3, 75.
- Prince Edward Island**.—An island situated in the Gulf of St. Lawrence, a province of the Dominion of Canada. Capital, Charlottetown. Pop. (1891), 109,078.
- Prince of Wales, First**, 10, 263.
- Prince's pine**, 5, 14.
- Princeton**.—A borough in Mercer Co., N. J., the seat of Princeton University. Pop. (1900), 3,899.
- Princeton (N. J.), Battle of**, 11, 125.
- Principal**, 13, 178.
- Printed forms for business use**, 13, 127.
- Printing**.—Printing was known in China in the 6th century. It was introduced into England about 1474 and into America in 1536.
- Prior, Matthew**.—(1664-1721.) English poet and diplomatist.
- Prism**, 7, 249.
Pentagonal, 7, 256.
Quadrangular, 7, 255.
Rhombic, 7, 255.
To find the contents of a, 13, 152.
model a, 7, 249.
Truncated, 7, 250.
Triangular, 7, 255.
- Privateers**, 12, 351.
- Private secretaries**, Women as, 7, 357.
- Privet**, 5, 73.
- Prize Courts**, 12, 351.
- Problems of Life**, 2, 334.
- Probus**, 10, 231.
- Proclamation of Neutrality**, 12, 345.
- Procter, Bryan Waller (BARRY CORNWALL)**.—(1787-1874.) A famous English poet.
- Proctor, Richard Anthony**.—(1837-1888.) A noted English astronomer and author.
- Procyon**.—(1) The ancient constellation Canis Minor. (2) The principal star of the constellation Canis Minor, 5, 141.
- Profession of Motherhood**, 2, 388.
- Progress of the Nineteenth Century**, 13, 330.
- Progressive Labor Party**, 12, 351.
- Prohibitionist vote in 1904**, 12, 182.
- Prohibitions without reasons are senseless**, 2, 205.
- Projections**, 7, 288.
- Promissory Notes**, 7, 450; 13, 50, 126.
- Pronator radii teres muscle**, 1, 275.
- Pronghorn Antelope**, 4, 31.
- Proof-reading for women**, 7, 391.
- Proof spirit**, 5, 230.
- Proportions**, Law of definite, 5, 171.
multiple, 5, 171.
- Proprietaries**.—In the early history of America, the European sovereigns parceled out the territory to their personal friends, who were thus proprietors. The latter appointed the governors and exercised all the prerogatives of the crown. Such governments were called proprietaries. Examples of the same were N. Y., N. J., Md., and the Carolinas.
- Propylæa**.—A highly ornamented gate or passageway leading to the Acropolis at Athens.
- Pro Rata**.—A proportional distribution.
- Prose defined**, 8, 404.
- Prosenchyma**, 4, 392.
- Proserpine**, 10, 95.
- Protest**, 13, 178.
- Proteus**, 10, 99.
- Prothonatory warbler**, 4, 186.
- Protogonus**, 10, 80.
- Protohippus**, 5, 466.
- Protoplasm**, 4, 391.

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- Protozoans**, 4, 384.
- Protractor**, 7, 267.
- Prout, Father**.—(1804-1866.) The pen-name of Francis Mahony, an Irish poet and journalist.
- Prout, Samuel**, 9, 282.
- Provence**.—An ancient province of southeastern France, having its capital at Aix.
- Providence**.—One of the capitals of R. I., situated on the Providence River, and the second city of New England. It is an important transportation center, and has important manufactures. Pop., 175,597.
- Providence Plantations**, 11, 45.
- Provincetown**.—A seaport of Mass., situated at the extremity of Cape Cod peninsula. It has extensive fishing industries. Pop. (1900), 4,247.
- Provisions of Oxford**, 10, 262.
- Prudence**, Training children in, 2, 459.
- Prud'hon, Pierre Paul**, 9, 265.
- Prunus Americana**, 4, 469.
 Cerasus, 4, 470.
 Chicasa, 4, 470.
 domestica, 4, 469.
 pennsylvanica, 4, 471.
 serotina, 4, 471.
- Prussia**.—A kingdom (constitutional monarchy) of northern Germany, the largest and most important state of the German empire. Its king is the German emperor. Its manufacturing interests are among the most important in the world. Area, 134,463 sq. miles; pop., about 32,000,000.
 at war with Austria, 11, 7.
 History of, 10, 335.
- Prussic acid**, 5, 182.
 in cherry kernels, 4, 471.
- Psammeticus**, 10, 180.
- Psoas muscle**, 1, 276.
- Psorophora**, 4, 357.
- Psyche**, 10, 95.
- Ptolemaic theory**, 10, 279.
- Ptolemy**.—The name of a brilliant dynasty of kings of Greek origin that ruled Egypt for nearly three centuries before the Christian era.
 1. **PTOLEMY I.**, surnamed **SOTER**.—A successful general under Alexander the Great, founder of the dynasty, assumed the title of king B. C. 306, abdicated, 285, died, 283.
 2. **PTOLEMY II.**, surnamed **PHILADELPHUS**.—(B. C. 309-247.) Son and successor of the preceding.
 3. **PTOLEMY III.**, surnamed **EUERGETES**.—Son and successor of the preceding. Reigned from B. C. 247 to his death in 222.
 4. **PTOLEMY IV.**, surnamed **PHILADELPHUS**.—Son and successor of the preceding, reigning from B. C. 222 to his death in 205.
 5. **PTOLEMY V.**, surnamed **EPIPHANES**.—Son and successor of the preceding. Reigned B. C. 205-181.
 6. **PTOLEMY VI.**, surnamed **PHILOMETOR**.—Son and successor of the preceding. Reigned B. C. 181-146.
 7. **PTOLEMY VII.**, surnamed **EUERGETES**, or **PHYSCON**.—Younger brother of the preceding whom he succeeded, usurping the throne and putting the rightful heir to death. Reigned, with a brief interruption, B. C. 146-117.
 8. **PTOLEMY VIII.**, surnamed **SOTER**, or **PHILOMETOR**, or **LATHYRUS**.—Son of preceding. Reigned conjointly with his mother, was by her driven out of the country, returned after her death and ruled B. C. 89-81.
 9. **PTOLEMY XI.**, surnamed **NEUS DIONYSIUS** and **AULETES**.—Illegitimate son of preceding. Ascended the throne B. C. 80, died 51.
 10. **PTOLEMY XII.**—Son and successor of the preceding. From B. C. 51 he reigned conjointly with his sister Cleopatra, whom he expelled in 49. In 48 he was defeated by Cæsar and drowned in the Nile while endeavoring to escape.
 11. **PTOLEMY**.—Grandson of Antony and Cleopatra, king of Mauretania, executed 40 A. D. by Caligula.
 12. **PTOLEMY L. CLAUDIUS PTOLEMÆUS**.—A celebrated mathematician, originator of the Ptolemaic theory of astronomy. Flourished in Alexandria. Died, about 151 A. D.
- Public career**, Poverty no obstacle to a, 12, 406.
- Public debts of the world**, 12, 352.
- Public Lands**, 12, 317.
 Man, The Citizen and the, 12, 411.
 Office, Success in, 12, 424.
- Publilian Law**, 10, 211.
- Publisher**, Author and the, 8, 230.
- Puccinia graminis**, 5, 97.
- Pudding stone**, 5, 440.
- Puebla**.—(1) A state in the south-central portion of Mexico. Area, 12,739. Pop., about 850,000. (2) A city, capital of the above state; a center of commerce and manufacture. Pop., about 110,000.
- Puebla (Mex.), Battle of**.—A period of fighting from Sept. 25 to Oct. 12, 1847, in which Col. Childs with 350 U. S. soldiers held the forts of the city against the army of Santa Anna.
- Pueblo Indians**.—A popular name given to several distinct tribes of Indians that inhabit chiefly N. M. and adjoining regions.
- Puerto Principe**.—(1) A province in the east-central part of Cuba. Pop., about 70,000. (2) The capital city of the above, a center of trade and manufacture. Pop., nearly 50,000.

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- Puffin**, 4, 221.
 Tufted, 4, 221.
- Pug dog**, 4, 22.
- Puget Sound**.—A sound, about 80 miles in length, in the northwestern part of the state of Washington, connected with the Pacific Ocean by the strait of Juan de Fuca. Its harbors are notably fine. The chief cities on its shores are Seattle and Tacoma.
- Pulleys**, 5, 264.
- Pullman**.—Formerly a village, now a part of Chicago, seat of the car-works of the Pullman Manufacturing Company, named for the inventor George M. Pullman.
- Pullman cars**, 8, 210.
 car-works strike, 12, 233.
- Pullman, George M.**, 8, 210; 14, 44.
- Pulmonary nerves**, 1, 284.
- Pulque**, 5, 50.
- Pulse a symptom of disease**, 1, 315.
 rate at various ages, 1, 283.
 Normal, 1, 282.
- Pultowa**, or **Pultava**, or **Poltava**.—(1) An agricultural province in southwestern Russia. (2) Capital of the above, a city noted for its fairs. Pop. (1897), 53,060.
 Battle of, 10, 331.
 Siege of, 10, 334.
- Puma**, 4, 73.
 Characteristics of, 4, 73.
 Food of, 4, 73.
 Geographical range of, 4, 73.
 Skin of, 4, 73.
- Pumpkin**, 5, 73.
- Pumps**, 5, 259.
 Drainage, 5, 260.
 Force, 5, 260.
 Lifting, 5, 259.
 Savery's steam, 5, 276.
- Puncheon**, 13, 219.
- Punctuality**, 14, 355.
 Devices for training in, 2, 317.
 Ordered living rests upon, 2, 339.
 Training in, 2, 316.
- Punctuation points**, 13, 178.
 Rules for, 13, 178.
- Punic Wars**, 10, 214.
- Punishment**, 2, 222.
 Allowances to be made for a child, 2, 226.
 as applied to the moral nature, 2, 225.
 Average woman on, 2, 223.
 Confining in the dark, 2, 233.
 Corporal, 2, 233.
 dependent upon motive, 2, 225.
 Depriving of meals, 2, 233.
 Individual temperament to be considered, 2, 226.
- Punishment** — *Continued*.
 Irrational, 2, 225.
 Natural method of, 2, 226.
 theory of, 2, 225.
 Nature's, 2, 222.
 Outgrowth of the fault, 2, 222.
 Painful consequences to be avoided, 2, 230.
 Spencer on, 2, 222.
 Taking the consequences of acts, 2, 229.
 Threats of, 2, 206.
- Punjab** annexed by England, 11, 16.
- Puppet Kings**, 10, 235.
- Purcell, Henry**.—(1658-1695.) Eminent English composer.
- Pure food bill**, 12, 181.
- Purgatory River**.—A river of southern Col., flowing into the Arkansas. Length, about 175 miles.
- Purim, Fast of**, 13, 102.
- "Puritan."**—A wooden center-board sloop designed by Edward Burgess and launched in South Boston in 1885. She defended the America's cup in two races with the "Genesta," Sept. 14 and Sept. 16.
- Puritan City, The**.—Boston.
- Puritanism**, Founding of, 11, 44.
 in England, 10, 325.
- Purity, Power of**, 14, 309.
- Purple finch**, 4, 184.
 grackle, 4, 176.
 Martin, 4, 192.
- Purpose, Power of**, 14, 203.
- Pusey, Edward Bouverie**.—(1800-1882.) An eminent English divine and Hebrew scholar.
- Pushkin, Alexander**.—(1799-1837.) The greatest Russian poet of the 19th century.
- Put-in-Bay**, 11, 257.
- Pydna, Battle of**, 10, 208.
- Pygmalion**.—In Greek legend, a king of Cyprus. An ivory statue made by himself was endowed with life by Aphrodite, in answer to his prayer.
- Pygmies**, 10, 107.
- Pyloric valves of the stomach**, 1, 277.
- Pyramid**, 7, 251.
 Frustum of a, 7, 253.
 Hexagonal, 7, 252.
 Pentagonal, 7, 252.
 To model a, 7, 251.
 Triangular, 7, 251.
 Truncated, 7, 253.
 Working drawing, 7, 289.
- Pyramids of Gizeh**, 10, 179.
- Pyrene oil**, 5, 6.
- Pyrenees**.—A mountain range separating

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France from Spain; 270 miles long and about 70 miles wide.
Pyrola elliptica, 5, 15.
Pyroligneous acid, 5, 231.
Pyrolusite, 5, 222.
Pyrrhus.—(318–272 B. C.) King of Epirus, and Greek warrior, 10, 207.
Pyrus Americana, 4, 438.
 Communis, 4, 438.

Pyrus — *Continued*.

Coronaria, 4, 438.
 Malus, 4, 437.
Pythagoras.—(580–504 B. C.) Founder of the Italiac School of philosophy, 9, 182, 353.
Python, 4, 246.
 Characteristics of, 4, 246.
 Geographical range of, 4, 246.
 Habits of the, 4, 246.

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Qua bird, 4, 224.
Quackenbos, G. P.—Born at New York, 1820; died, 1881. An educator. He was graduated from Columbia in 1843; was for many years principal of a collegiate school in New York; was the author of various text-books on U. S. history, grammar, rhetoric, arithmetic, and natural philosophy.
Quadi, Conquest of the, 10, 229.
Quadrant, 13, 148.
Quadrilateral, or Quadrangle.—Four strong fortresses of northern Italy — Peschiera, Mantua, Verona, and Legnago.
Quadrilateral, 7, 248.
Quadruple Alliance.—A league against Spain, formed by Great Britain, France, Austria, and Holland. Completed in 1719.
Quaestors, 10, 211.
Quagga, 4, 91.
 Flesh of the, 4, 91.
Quai d'Orsay.—In Paris, the quay along the south bank of the Seine, on which are situated important public offices.
Quail, 4, 123.
 Eggs of the, 4, 114.
 Nest of the, 4, 113.
Quaker City.—A popular name for Philadelphia.
Quaker Hill, 11, 129.
Quaker Ladies, 5, 24.
Quaker Poet.—A name given to John G. Whittier.
Quakers.—The popular name given to the Society of Friends, an ecclesiastical body founded about 1669 by George Fox, 11, 46.
Quaking Grass.—A genus of grasses (*Briza*) whose value is due to the fact that it thrives on comparatively poor soil, 5, 88.
Quang-See.—A province of China; area, about 79,000 sq. miles; pop., about 8,000,000.
Quangtung.—A province of the Chinese empire. Area, about 80,000 sq. miles; pop., about 20,000,000.

Quarantine.—A term derived from the French, meaning "40 days." Formerly, passengers arriving at Venice from the Levant were required to remain 40 days in the House of St. Lazarus or the Lazarets. In the U. S. the first national quarantine act was passed Feb. 23, 1799. In 1878, however, a national quarantine law was passed, authorizing the establishment, in certain contingencies, of national quarantines. In March, 1883, \$100,000 was appropriated by the Federal Government for maintaining quarantine stations along the coasts, and the authority for declaring quarantine was conferred upon the President. Most of the quarantine stations are under state supervision. The mode of procedure is as follows: On the arrival of a vessel, it is visited by the health officer of the port, who examines her bill of health, musters the passengers and crew, and inspects the vessel in every part. If free from contagious disease, and if she does not hail from an infected port, she is permitted to proceed without further detention. If she sailed from an infected port, she is detained until the expiration of the period of incubation of the disease prevalent at the port whence she sailed. If disease is found on board, or if the vessel is in an unsanitary condition, the diseased persons are removed to a quarantine hospital and the vessel is thoroughly purified before being permitted to proceed to her landing.

Quarles, Francis.—(1592–1644.) An English poet, whose works were at one time very popular.

Quarnero, Gulf of.—An arm of the Adriatic Sea, between Istria and the Island Cherso.

Quarrelsomeness, Cause of, 2, 314.

 "Justice Club" a cure for, 2, 314.

Quarter Days, 13, 101.

 dollar, 13, 164.

 eagle, 13, 165.

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Quartering Acts, 11, 129.

"Quarterly Review."—An English publication the organ of the Tory party; first published in 1809.

Quartidi, 13, 97.

Quartley, Arthur.—(1839-1886.) An American painter of marine subjects.

Quarto, 13, 151.

Quartu, Gulf of.—An inlet of the Gulf of Cagliari, in Sardinia.

Quartz, 5, 446.

Quassia, 5, 7.

Amara, 5, 7.

Quaternary period, 5, 466.

Quatre-Bras.—A village of Belgium, a few miles from Brussels; the scene of an engagement between the English and allied forces under Wellington, and the French under Ney, June 16, 1815, in which Ney was compelled to retreat.

Quatrefoil, To draw a, 7, 242.

Quay, Matthew Stanley, 12, 352.

Quebec.—A province of the Dominion of Canada, British North America, which forms the northern boundary of the states of New York, New Hampshire, Vermont, and Maine. It is somewhat mountainous, and the chief river is the St. Lawrence. Lumbering, agriculture, and fishing, are the principal industries. It was settled by the French, and was ceded to Great Britain by France in 1763. Pop. (1901), 656,231.

Quebec (Canada), Battle of, 11, 130.

Cartier builds a fort at, 11, 39.

Quebec, City of.—The capital of the province of Quebec. It is picturesquely situated at the junction of the St. Charles River with the St. Lawrence and is the most strongly fortified city on the American continent. The city was founded by the French in 1608. In 1759, the battle of Quebec was fought between the English and the French on the Plains of Abraham near the city, resulting in a victory for the English, and ultimately in the loss of Canada to the French. The last attack upon the city was an unsuccessful one made by the Americans in 1775 under Montgomery, who was killed. Pop. (1901), 68,840.

Queen Anne's War, 11, 64.

Queen Charlotte Islands.—Lying in the Pacific Ocean, west of British Columbia, to which province they belong. Inhabited by Indians.

Queen Charlotte Sound.—Between Vancouver Island and British Columbia.

Queen City.—A name popularly applied to the city of Cincinnati, Ohio.

Queen City of the Lakes.—Buffalo.

Queen of Saba, 3, 296.

Queen of the Antilles.—A poetical name for Cuba.

Queensbury, Marquis of.—Prominent authority on various sports, and author of the "Queensbury Rules" as adopted by the prize ring of England and America.

Queen's College.—In England, a college of Oxford University, founded in 1340 by Robert de Eglesfield in honor of Philippa, wife of Edward III.

Queens' College.—In England, a college of Cambridge University founded by Margaret of Anjou, wife of Henry IV., 1448.

Queen's County.—In Ireland, a county of Leinster. Chief town Maryborough.

Queensland.—A British colony comprising the northeastern part of Australia. The capital is Brisbane; chief industries, stock farming and mining. Pop., about 400,000.

Queenston, or Queenstown, 11, 257.

Queenstown.—In Ireland, a seaport of County Cork, situated on an island 8 miles from Cork. A calling point for transatlantic steamers. Pop., about 10,000.

Queen's ware, 1, 220.

Quellinus, Artus, 9, 396.

Quercitron, 4, 462.

Quercus acuminata, 4, 464.

Alba, 4, 461.

coccinea, 4, 462.

digitata, 4, 462.

ilex, 4, 486.

laurifolia, 4, 463.

macrocarpa, 4, 465.

Marylandica, 4, 464.

minor, 4, 464.

palustris, 4, 465.

phellos, 4, 463.

platanoides, 4, 463.

prineides, 4, 466.

prinus, 4, 464.

rubra, 4, 461.

velutina, 4, 462.

Querétaro.—An important city of Mexico, capital of a state of the same name, 110 miles northwest of Mexico city. It is especially noted for its cotton manufactures. Here, in 1867, Maximilian was captured, and shot by order of a court-martial. Pop., about 36,000.

Quesnoy, Le.—In France, a fortified town in the department of Nord. The scene of many military engagements.

Questions, Answering a child's, 2, 115.

Quetelet's table of height and weight, 2, 94.

Quetta.—A town and important strategic point in Baluchistan.

Quiberon.—In France, a small town in the department of Morbihan; here, in 1795, the

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- French royalists, aided by the Brittany royalists and by an English fleet, were defeated by the republicans under Hoche.
- Quichuas.**—The predominating Indian race of Peru, at the time of the Spanish conquest.
- Quick-lime,** 5, 208.
- Quids,** 11, 257.
- Quileute.**—A tribe of North American Indians, native to the territory comprising the present state of Washington. In greatly reduced numbers they are now confined to the Neah Bay reservation, Washington.
- Quillota.**—In Chile; a town of the province of Valparaiso. Pop., about 11,000.
- Quin, James.**—(1693-1766.) A noted English actor; for a time a rival of Garrick.
- Quince,** 5, 7.
- Quinctunnetu.**—The name of a subdivision of the Athapaskan stock of N. American Indians signifying "people among the gravel." They are also called Wishtenatin or Pistol Indians from their former habitat on the Pistol River, Oregon. The survivors still live in Oregon on the Siletz reservation. (See **ATHAPASCAN**.)
- Quincy.**—(1) A city in Norfolk Co., Mass., on Quincy Bay in Boston Harbor. It was the birthplace of John Hancock, John Adams, and John Quincy Adams; is famous for its granite quarries. Pop. (1900), 23,899. (2) The capital of Adams Co., Ind., on the Mississippi River. It is a railway center and a seat of river trade; has important manufactures. Pop. (1900), 36,252.
- Quincy, Josiah,** 11, 64.
- Quincy, Josiah,** 11, 130.
- Quinebaug.**—A river in Mass. and Conn. Length, 80-90 miles.
- Quinine, or Quinia.**—A vegetable alkaloid, discovered by Pelletier and Caventou, in 1820. A constituent of the genuine cinchona barks; it is much used medicinally, 5, 249.
- Quinsigamond Lake.**—A lake in Mass.
- Quinsy, Treatment of,** 1, 325.
- Quint,** 13, 165.
- Quintal,** 13, 153.
- Quintidi,** 13, 97.
- Quintilian (MARCUS FABIVS QUINTILIANUS).**—(35-95?.) A celebrated Roman rhetorician.
- Quire,** 13, 150.
- Quirinal.**—The highest of the seven hills of ancient Rome.
- Quitman, John Anthony.**—(1799-1858.) An American politician and general.
- Quito.**—In South America, the capital of Ecuador and of the province of Pichincha. It occupies a plateau at an elevation of about 10,000 feet above the sea-level; has been several times destroyed by earthquakes, the worst occurring in 1797, when 40,000 people were killed; another occurred in 1859, with the loss of 5,000 lives. There are manufacturing interests and an extensive export trade. Pop. about 80,000.
- Quoits,** 6, 172.
- Quorum,** 12, 241.

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- Rabbit, American,** 4, 40.
 Habits of, 4, 40.
 Angora, 4, 43.
 Care of, 1, 152.
 European, 4, 41.
 Flesh of, 4, 43.
 Food for, 1, 153.
 House and run for, 1, 153.
 How to lift a, 4, 42.
 Skin of the, 4, 43.
 Tame, 4, 42.
 Teeth of the, 4, 41.
 Wild, 4, 41.
 Young of the, 1, 153.
- Rabelais, Francois.**—(1495-1553.) A famous French humorist and man of letters.
- Raccoon, or Coon River.**—A tributary of the Des Moines River, in Iowa. Length, about 175 miles.
- Raccoon, The,** 4, 55.
 Flesh of the, 4, 56.
 Food of the, 4, 55.
 Habits of the, 4, 55.
 Home of the, 4, 55.
 Hunting the, 4, 55.
 Skin of the, 4, 56.
 Taming the, 4, 56.
- Race Cape.**—A headland at the southeastern extremity of Newfoundland.
- Rachel, Elisa, or Elisabeth Felix.**—(1821-1858.) A celebrated French tragedienne, of Hebrew descent.
- Racine.**—A city of Wisconsin, situated on Lake Michigan; grain trade; manufactures agricultural machinery, wagons, etc. Pop. (1900), 29,102.
- Racine, Jean Baptiste.**—(1639-1699.) A celebrated French tragic poet.

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- Racket Lake.**—A lake in the Adirondack Mountains, northern N. Y.
- Racket River.**—A river in the northern part of N. Y., flowing into the St. Lawrence.
- Radcliffe, John.**—(1650-1714.) A noted English physician; founder of the Radcliffe library, belonging to the University of Oxford.
- Radetzky,** Austrian commander, 11, 2.
- Radiates,** 4, 384.
- Radical,** in chemistry, 5, 174.
- Radicle,** 4, 396.
- Radio-activity,** 5, 224.
- Radish,** 5, 74.
- Radium,** Properties of, 5, 224.
Source of, 5, 223.
- Radius,** outer bone of the arm, 1, 274.
- Ræren stoneware,** 1, 220.
- Raff, Joseph Joachim.**—(1822-1882.) An eminent German composer.
- Ragnarok** (Norse Mythology), 10, 127.
- Rag-paper,** 5, 238.
- Rahway.**—A city in N. J., on the Rahway River, 17 miles from New York; noted for its manufactures, especially of carriages. Pop. (1900), 7,935.
- Raikes, Robert.**—(1735-1811.) An English publisher, and philanthropist; founder of the modern system of Sunday Schools.
- Rail, The,** 4, 130.
Carolina, 4, 131.
Clapper, 4, 131.
Common, 4, 131.
King, 4, 130.
Red-breasted, 4, 130.
Sora, 4, 131.
Virginia, 4, 130.
- Railed off spaces for children,** 2, 82.
- Railroad City, The.**—A name given to Indianapolis.
- Railroad, The first,** 8, 211.
- Railroading** as a profession, 5, 414.
How to succeed in, by James J. Hill, 5, 402.
- Railroad men,** Training, by W. M. Garrett, 5, 409.
- Railroads, Pacific,** 12, 348.
- Railroads,** Total mileage of, 5, 398.
- Railway,** The first, 5, 396.
freight traffic of the world, 13, 335.
- Railway mail service,** Regulations of, 13, 365.
Miles of, in the United States, 5, 397.
- Railways,** Electric, 5, 319, 414.
First dates of opening, 5, 397.
Inclined, 5, 263.
- Rain,** 5, 161, 167.
Description of, for children, 2, 145.
Effect on rocks and soil, 5, 427.
Quantity of snow equal to one inch of, 5, 167.
- Rain-bird,** 4, 186.
- Rainbow,** 5, 302.
Telling children about, 2, 145.
- Rainier, Mount.**—The highest mountain in the state of Washington; height, 14,526 ft.
- Rains, Gabriel James,** 12, 109.
- Rainy day,** Amusements for a, 2, 144.
- Rainy Lake.**—A lake northwest of Lake Superior between Minnesota and Canada; 58 miles long.
- Raisin,** 4, 483.
- Raisin River.**—A river of Southern Mich., flowing into Lake Erie. Length, 125 miles.
- Rajputana, or Rajpootana.**—In India. The name given to twenty native states under British protection.
- Rajputana.**—A great region of India, consisting of twenty states, and extending from the province of Sind on the west to the North-western Provinces on the east, and from Bombay on the south to the Panjab on the north. Each of the twenty states has its own autonomy and separate chief, and there is one small British division. The northern part of the Rajputana is for the most part sandy and unproductive, including the great desert of northern India. The southern division is much more fertile, furnishing pasturage for herds of camels, horses, and sheep. The country has some mineral products. Area, 132,461 sq. miles; pop., about 11,000,000.
- Rake's Progress, The.**—A famous series of pictures by Hogarth.
- Raleigh.**—The capital of N. C. It has a large trade in cotton, and important manufactures. Pop. (1900), 13,643.
- Raleigh, Sir Walter.**—(1552-1618.) An English historian, courtier, and colonizer. A favorite of Queen Elizabeth, 11, 40, 41.
Courtesy of, 2, 474.
- "Raleigh," The,** 12, 253.
- Rama,** hero of the Ramayana, 3, 323.
- Rama Chandra,** 10, 12.
- Ramadan,** 13, 102, 103.
- Ramayana,** 3, 319.
- Rambouillet Decree,** 11, 259.
- Rameau, Jean Philippe.**—(1683-1764.) A noted French composer.
- Rameses I., or Ramses.**—An Egyptian king; founder of the 19th dynasty, about 1400 B. C., 10, 179.
- Rameses II., or Ramses: Miamun I.**—A famous Egyptian king, about 1300 B. C., son of Seti I. and third of the 19th dynasty, 9, 345.
- Rameses III.**—An Egyptian king, about 1200 B. C.; founder of the 20th dynasty.
- Ramsey, Alexander,** 12, 353.

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- Ramsey, Allan.**—(1686-1758.) A noted Scottish poet.
- Ramsey, David,** 11, 130.
- Ramsgate.**—An important summer resort in the Isle of Thanet, 65 miles east by south from London.
- Randall, Alexander Williams.**—(1819-1872.) An American politician; postmaster general 1866-69.
- Randall, James Ryder.**—Born at Baltimore, 1839. An American journalist and song writer; author of "Maryland, My Maryland."
- Randall, Samuel Jackson,** 12, 353.
- Randall's Island.**—An island in the East River, belonging to New York City, containing several hospitals and other institutions.
- Randolph, Edmund.**—(1753-1813.) An American statesman.
- Randolph, John,** "of Roanoke," 11, 257; 14, 278.
- Randolph, Peyton.**—(1723-1775.) An American patriot; president of the first Continental Congress in 1774.
- Range, The kitchen,** 1, 234.
- Rangeley Lakes.**—A group of lakes in the western part of Maine.
- Rangoon.**—Maritime capital of the Burmese empire, India
- Ranke, Leopold von.**—(1795-1886.) A celebrated German historian.
- Ranunculaceæ,** 5, 74.
- Ranunculus acris,** 5, 74.
 bulbosus, 5, 74.
- Raoux, Jean.**—(1677-1734.) A noted French painter.
- Raphael,** 9, 231; 14, 227.
 Madonnas of, 9, 254, 255.
- Raphides,** 4, 392.
- Rapidan River.**—The chief tributary of the Rappahannock River (Va.); length, about 90 miles.
- Rapp, George.**—(1770-1847.) A German-American socialist, founder of the Harmonists.
- Rappahannock.**—A river in Virginia, flowing into the Chesapeake Bay.
- Raptorez,** a class of birds, 4, 103.
- Raritan.**—A river in N. J., flowing into the Raritan Bay; length, 75 miles.
- Raritan Bay.**—A bay on the eastern coast of N. J., south of Staten Island.
- Rask, Rasmus Kristian.**—(1787-1832.) A noted Danish philologist and author.
- Raspberry.**—The most valuable of the species *Rubus*. It is extensively cultivated for its fruit. The root is perennial; the stems biennial.
- "Rasselas."**—A philosophical romance by Dr. Samuel Johnson, published, 1759.
- Ratisbon.**—In Bavaria, the capital of Upper Palatinate; it has manufacturing industries, and much historical interest.
- Rat Islands.**—A group of islands near the western end of the Aleutian Archipelago.
- Ratitæ,** a class of birds, 4, 104.
- Raton Mountains.**—A group of mountains in Colorado and New Mexico.
- Rattan,** 5, 54.
- Rat terrier,** 4, 21.
- Rattlesnake.**—A poisonous American snake of the genus *Crotalus*, or *Sistrurus*, characterized by a so-called "rattle," or series of rings at the end of its tail, 4, 245, 248.
 Characteristics of the, 4, 248.
 Home of the, 4, 248.
 Rattles of the, 4, 248.
 Skin of the, 4, 248.
- Rauch, Christian Daniel,** 9, 403.
- Ravana,** 3, 323.
- Raven,** 4, 147.
 Habits of the, 4, 148.
- Ravenna.**—(1) A province of Italy. (2) The capital of the province of Ravenna; famous for its churches.
 Exarchs of, 10, 259.
 Theodoric at, 10, 234.
- Ravenna.**—The county-seat of Portage Co., Ohio. Pop. (1900), 4,003.
- Rawal Pindi, or Rawul Pindee.**—(1) In British India, a division of the Panjab. Pop., about 3,000,000. (2) The capital of the district of Rawal Pindi; an important military station and trade center.
- Rawlins, John Aaron,** 12, 353.
- Rawlinson, Sir Henry Creswicke.**—(1810-1895.) A noted English diplomatist and Assyriologist.
- Ray, The** (see SKATE), 4, 277.
 Characteristics of the, 4, 277.
 Eagle, 4, 277.
 Flesh of the, 4, 278.
 Food of the, 4, 277.
 Reproduction of the, 4, 278.
 Saw fish, 4, 278.
 Sea-devil, 4, 277.
 Sting, 4, 277.
- Raymond (Miss.), Battle of,** 12, 109.
- Raymond, Henry Jarvis.**—(1820-1869.) An American journalist and politician; founder of the New York "Times," 1841.
- Raymond, John T.**—(1836-1887.) A noted American comedian.
- Razor-bill.**—A species of auk common on the British coasts and around the northern Atlantic. It is about 17 inches long. Its eggs are esteemed a delicacy and its flesh is often used for food.

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Ré, or Rhé, Île de.—An island in the Bay of Biscay, belonging to France; salt manufacture the chief industry.

Read, George, 11, 130.

Read, Thomas Buchanan.—(1822-1872.) A poet and painter; author of the poem "Sheridan's Ride."

Reader, Advice to the public, 8, 253.

Reading.—The capital of Berks Co., Pa. It has coal mining interests and is a manufacturing center. Pop. (1900), 78, 961.

Reading, 8, 522.

a cheap form of entertainment, 8, 144.

Choice of, 8, 502.

Disadvantages as a means of learning, 3, 6.

Drama, 8, 517.

Dramatic reading overdone, 3, 8.

Essays, 8, 516.

for children, A course of, 8, 149.

Habit of choice, 8, 495.

clear thought, 8, 499.

comparison, 8, 500.

systematic, 8, 498.

How to read a classic, 8, 526.

study the "Merchant of Venice," 8, 534.

use a large library, 8, 542.

Library of home culture, 8, 520.

Love of books, 8, 493.

Novel, 8, 518.

Principles of, 8, 493.

Suggestions as to habits of, 8, 490.

Reagan, John H., 12, 309.

Real estate, 13, 179.

Agents, 13, 180.

Deeds of, 13, 181.

Forms relating to, 13, 127.

Investments in, 13, 179.

Law for the descent of, 13, 133.

Management of, 13, 179.

Not disposed of by will, 13, 133.

Renting 13, 183.

speculation, 13, 185.

Ream, 13, 150.

Rear-Admiral, 12, 353.

Reason, 2, 166.

Drummond quoted on, 2, 166.

First show of, 2, 166.

Perception of similarity, 2, 169.

Power of animals to, 2, 166.

Relation to observation, 2, 164.

other faculties, 2, 171.

truth and justice, 2, 175.

Training the, 2, 166.

Reasoning defined, 2, 167.

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insufficient data, 2, 165.

Reasoning defined — *Continued.*

power capable of improvement, 2, 172.

not inheritable, 2, 171.

Réaumur thermometer, 5, 268.

Rebellion, Whisky, 11, 179.

Rebi ul-Ahir, 13, 103.

Rebi ul-Evel, 13, 103.

Récamier, Madame (JEANNE FRANÇOISE JULIE ADÉLAIDE BERNARD).—(1777-1849.) A celebrated French beauty and leader of society, 14, 303.

Receipt, 13, 190.

Form of, 7, 449.

Taking a, 7, 448.

Receiver, 13, 190.

Reception-hall decoration, 1, 12.

Recklessness, Gymnasium training for, 2, 322.

Risks not to be magnified, 2, 322.

Reconcentrados, 12, 353.

Reconstruction, 12, 156.

"Recourse, Without," 13, 51.

Rectangle, To find the area of a, 13, 151.

Rectum, 1, 279.

Rectus abdominis muscle, 1, 275.

Red-backed sandpiper, 4, 133.

Red Bank.—A village in N. J., near Philadelphia. Here in 1777, the Americans defeated the British and Hessians. Pop. (1900), 5,428.

Red bee-bird, 4, 190.

Red bird, 4, 187.

Summer, 4, 190.

Red-breasted rail, 4, 130.

Red Canary, 4, 168.

Red-eyed vireo, 4, 167.

Red-flowered maple, 4, 407.

Red-head duck, 4, 110.

Red Jacket.—(1752-1830.) Chief of the Seneca tribe of Indians; noted as an orator.

Red Lake.—A lake in northern Minn., 53 miles in length.

Red Lake River.—A river of northwestern Minn., length, 150 miles.

Red lory, 4, 209.

Red maple, 4, 407.

Red-osier dogwood, 5, 45.

Redpath, James.—(1733-1891.) An abolitionist and author.

Red Peak.—A peak of the Park Range in Col., 13,333 ft. in height.

Red Riding-hood, German fairy tale, 3, 100.

Red River.—A large tributary of the Mississippi, rising in northwestern Texas, and joining the Mississippi in the southeastern part of Louisiana; length, about 1,200 miles; navigable 200 miles.

Red River Campaign, 12, 109.

Red River of the North.—A river in the U. S. and Canada, called, in the northern part of

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- its course, the Otter Tail. Length, about 700 miles.
- Red River Settlement.**—A name formerly given to the province of Manitoba, Canada.
- Red Sea.**—An arm of the Indian Ocean, lying between Arabia and Africa. Length, 1,450 m. Greatest width, 205 m.
- Redshanks,** 5, 18.
- Redsheb,** 13, 103.
- Red Squirrel,** 4, 58.
- Red-tailed hawk,** 4, 140.
- Red-throated loon,** 4, 220.
- Red Wing.**—A city of Minn., situated at the head of Lake Pepin. It exports wheat. Pop. (1900), 7,525.
- Red Wing.**—A species of thrush well known in Britain as a song bird.
- Red-Winged black-bird,** 4, 175.
Nest of, 4, 113.
- Redwood tree of California,** 4, 467.
- Reed, Joseph,** 11, 130.
- Reed, Thomas Brackett,** 12, 354.
at college, 8, 170.
- Reed bird,** 4, 156.
- Reed Rules.**—Rules adapted by the Fifty-first Congress, by which filibustering by the opposition was prevented.
- Reese River.**—A tributary of the Humboldt River, in Nevada.
- Referendum in Switzerland,** 10, 388.
- Reformation, The.**—The great religious movement in Europe in the 16th century, which ended in the establishment of the Protestant church. Its most prominent leader was Martin Luther, 10, 288.
Henry VIII.'s part in the, 10, 300.
- Reform Bill,** 10, 370.
Second, 10, 381.
- Refunding,** 13, 191.
- Registered letters,** 13, 253.
- Registration.**—Method by which election frauds are prevented; the preparation of lists of voters in each election district where registration is required by law.
- Registration list,** 12, 429.
of votes, 12, 427.
- Regulators.**—An association of men in N. C., who in 1768 petitioned the governor to regulate certain public grievances, for which act they were accused of treason. The term has also been applied to Vigilance Committees in the early days of the Western states.
- Regulus,** a star, 5, 142.
- Rehan, Ada.**—Born in Limerick, Ireland, 1860. A noted American actress.
- Rehoboam,** 10, 183.
- Rehoboth Bay.**—A bay on the coast of Delaware.
- Reichstag.**—An imperial parliament or diet, the principal deliberative body in Germany and in other countries of Europe, 10, 386.
- Reid, Mayne.**—(1818–1883.) A noted British novelist.
- Reid, Whitelaw,** 12, 182.
- Reign of Terror.**—That period of French history, extending from about March, 1793, to July, 1794, in which Robespierre and his associates relentlessly executed all persons who were obnoxious to themselves, without regard to age, sex, or station, 10, 345.
- Reindeer,** 4, 29.
Moss, 5, 93.
- Reinhart, Charles Stanley.**—(1844–1896.) An American illustrator.
- Re-insurance.**—Transfer of part of the contract of insurance from one insurer to another.
- Réjane, Gabrielle Réju.**—Born, 1857; a noted French actress.
- Religion, Chaldean,** 10, 56.
Hindu, 10, 3.
of Egypt, 10, 66.
- Rembrandt,** 9, 303.
Van Dyke quoted on, 9, 306.
- Remington, Frederic.**—Born at Canton, N. Y., 1861. A well-known illustrator.
- Remittance,** 13, 191.
- Remora,** 4, 283.
- Remus,** 10, 208.
- Rémusat.** —
1. RÉMUSAT, COMTESSE DE (CLAIRE ELISABETH JEANNE GRAVIER DE VERGENNES).—(1780–1821.) A French lady, attendant of the Empress Josephine, noted for her writings on the court of Napoleon.
2. RÉMUSAT, COMTE FRANÇOIS MARIE CHARLES DE.—(1797–1875.) A French politician and author, son of the preceding.
3. RÉMUSAT, JEAN PIERRE ABEL.—(1788–1832.) A French orientalist.
- Renaissance.**—The revival of the classic style of art, in the 15th and 16th centuries, 9, 343; 10, 307.
Early, 9, 218.
High, 9, 218.
Home during the, 1, 6.
Italian, 9, 218.
Painters of the high, 9, 227.
- Renan, Joseph Ernest.**—(1823–1892.) A famous French philosopher, historian, philologist, and critic of the destructive type; known in America chiefly from his studies of Jewish and Christian characters.
- René, King of Anjou,** 9, 260.
- Renewal,** 13, 191.
- Reno.**—The capital of Washoe Co., Nev. Pop. (1900), 4,500.

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- Reno, Marcus A.**, 12, 109.
- Renting real estate**, 13, 183.
- Renwick, James.**—(1818-1895.) A noted American architect.
- Reply to Hayne**, 11, 396.
- Reporting for a newspaper**, 8, 474.
 Woman reporter, 8, 486.
- Repoussé work for children**, 2, 418.
- Reptiles**, 4, 243, 245.
 Characteristics of, 4, 243.
 Temperature of blood of, 4, 95.
 Varieties of, 4, 243.
- Republican Party**, 11, 396.
 Liberal, 11, 318.
- Republican River.**—A river of Colorado, Nebraska, and Kansas; length about 500 miles.
- Republican weaver-bird**, 4, 200.
 Nest of, 4, 200.
- Requesens**, 10, 299.
- Requiem, Mozart's**, 9, 128.
- Resaca (Ga.), Battle of**, 12, 109.
- Reserve Bank**, 13, 31.
- Reserve Corps**, 14, 348.
- "Resolute."**—One of the ships of Sir Edward Belcher's Arctic exploring expedition, which sailed in 1852, in search of Sir John Franklin.
- Resources**, 13, 39.
- Respiration, Artificial**, 1, 356.
 Mechanism of, 1, 293.
- Respirations, Number per minute**, 1, 294.
- Respiratory diseases**, 1, 320.
 Bronchitis, 1, 327.
 Chronic Catarrh, 1, 324.
 Croup, 1, 325.
 Pneumonia, 1, 327.
 Quinsy, 1, 325.
 Snuffles, 1, 323.
 Tonsillitis, 1, 324.
- Respiratory system**, 1, 291.
- Responsiveness, How cultivated**, 2, 476.
- Restoration, The.**—In English history, the period when monarchical government was restored by the accession of Charles II. (1660).
- Resuscitating, apparently drowned persons**, 1, 356.
- Reszke, Edouard de.**—Born, 1856. A noted bass singer.
- Reszke, Jean de.**—Born at Warsaw, 1853. A noted tenor singer.
- Retreat of the ten thousand**, 10, 189.
- Returns**, 13, 191.
- Retz, Cardinal de (JEAN FRANÇOIS PAUL DE GONDI).**—(1614-1679.) A famous French politician and historian.
- Reuchlin, Johann.**—(1455-1522.) A celebrated German humanist; author of various educational works.
- Revell, Emma C.**, 1, 235.
- Revenue, Internal**, 12, 308.
- Revere.**—A town in Mass., on Massachusetts Bay; a popular resort. Pop. (1900), 10,395.
- Revere, Paul**, 11, 130.
- Reverence best taught by example**, 2, 300.
 Training a child in, 2, 300.
- Reversion**, 13, 191.
- Revival of Learning**, 10, 307.
- Revolution, English.**—The political movement that forced James II. to leave England (1688) and settled the crown on William and Mary, who signed the Declaration of Right upon their accession to the throne (1689).
- "Revolution," The.**—A paper founded by Susan B. Anthony, to advocate the rights of women before the law.
- Revolutionary Tribunal of France**, 10, 345.
 War in America, 11, 66.
- Revolution in America, Influence of the French**, 11, 179.
- Reynolds, Sir Joshua**, 9, 277; 14, 21, 227.
- Reynolds, James B.**, on the "Labor Problem," 13, 279.
- Rhadamanthus**, 10, 87.
- Rhea**, 4, 232.
- Rheims, or Reims.**—A manufacturing and commercial city of France, noted for its cathedral, the historic place of coronation of the French kings. Pop., about 110,000.
- Rhembra**, 10, 10.
- Rhine.**—The chief river of Germany, celebrated for its beauty and its legends. It rises in Switzerland and empties into the North Sea. Its length is about 800 m. and it is navigable for large boats from Kehl, near Strasburg, to its mouth.
 Confederation of the, 10, 356.
- Rhinoceros**, 4, 81.
 Characteristics of the, 4, 81.
 Flesh of the, 4, 82.
 Geographical range of the, 4, 81.
 Habits of the, 4, 81.
 Hide of the, 4, 81.
 Hunting the, 4, 81.
- Rhinoceros-bird, or Rhinoceros-hornbill.**—A large tree-horn bill (*Buceros rhinoceros*) having an enormous bill, nearly a foot long, surmounted by a horny casque almost as large; found in Sumatra, 4, 81.
- Rhizopod, The**, (see RADIATES,) 4, 381, 384.
- Rhode Island.**—One of the thirteen original states of the United States of America. Its capitals are Providence and Newport. It is the smallest of the states and is the most densely populated. It includes a number of islands

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- along the coast, among which are Rhode Island, Canonicut, Prudence, and Block Island. It has an area of 1,053 sq. miles and a population of 428,556.
- Rhode Island**, or **Aquidneck**.—An island in Narragansett Bay, a part of the state of Rhode Island. It contains the city of Newport.
- Rhodes**.—An island in the Mediterranean belonging to Asiatic Turkey; 45 miles long, 20 miles wide; an important and independent state of ancient Greece.
- Rhodes, Cecil J.**—(1853-1902.) An Anglo-South African statesman and financier. He went out from England to Cape Colony in 1871 for his health, and settled at Kimberley. Here he engaged in diamond-mining. He was a prominent figure in Cape politics and also in the defense of Kimberley during the Boer War. The great ambitions of his life were a united British South Africa from the Cape to the Zambesi, and a Cape to Cairo railway along the Nile. He died March 26, 1902.
- Rhododendron, American**, 5, 13.
- Rhomboid, To construct a**, 7, 242.
- Rhombus**, 7, 248.
To construct a, 7, 241.
- Rhone**.—An important river of Europe, rising in the Rhone glacier, Switzerland, and emptying into the Mediterranean Sea at Marseilles. Length, about 500 miles.
- Rhubarb**.—A genus of plants of the natural order *Polygonaceæ*. The species which are numerous are large herbaceous plants, natives of the central regions of Asia, with tough almost fleshy roots and crest, thick branching stems. The roots are medicinal, 5, 274.
Turkey, 5, 74.
- Rhus aromatica**, 4, 433.
Canadensis, 4, 433.
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- Rhymes and rhyming**, 8, 403.
Child's love of, 2, 116.
- Rhythm, Development of**, 9, 11.
- Rialto, Bridge of the**.—Bridge over the Grand Canal, Venice, begun 1588.
- Ribault, or Ribaut, Jean**.—(1520-1565.) A French navigator, who established colonies and forts in S. C. and Fla., 11, 64.
- Ribera, José**, 9, 253, 258.
- Ribs**, 1, 273.
- Rice**, 5, 88.
introduced into America by Thomas Jefferson, 5, 88.
- Richard I.**, "The Lionhearted."—(1157-1199.) King of England, 1189-99, 10, 258, 262.
- Richard II.**—(1366-1400.) King of England, 1377-99, 10, 270.
- Richard III.**—(1452-1485.) King of England, 1483-85, 10, 274.
- Richards, William Frost**.—Born at Philadelphia, 1843. An American marine and landscape-painter, 9, 331.
- Richardson, Samuel**.—(1689-1761.) England's first great novelist.
- Richelieu, Cardinal**, 10, 311; 14, 102.
- Richelieu River, or Chambly, or St. John**.—A river of Quebec, Canada; length, about 80 miles.
- Richepin, Jean**.—Born, 1849. French poet and dramatist.
- Richfield Springs**.—A village and fashionable health resort of New York; noted for its sulphur springs. Pop. (1900), 1,537.
- Richings, Peter**.—(1797-1871.) A noted actor and theatrical manager.
- Rich Man's Prayer**, French fable, 3, 186.
- Richmond**.—(1) The capital of Va.; settled in 1609. It has flour, tobacco, and iron industries. Pop. (1900), 85,000. (2) A town of Indiana; a railroad and manufacturing center. Pop. (1900), 18,226.
- Richmond, 11**, 489; 12, 60.
- Richmond, Capture of**.—See GRANT, U. S.
- Rich Mountain (W. Va.), Battle of**, 12, 109.
- Richter, Jean Paul Friedrich**.—(1763-1825.) German writer—humorous and sentimental.
advice on training the will, 2, 215.
quoted on children dancing, 2, 132.
play, 2, 122.
prudence and justice, 2, 221.
School of, 2, 174.
- Riel, Louis**.—(1844-1885.) A Canadian half-breed Indian; leader of the Red River rebellion in 1879-80, and of the rebellion of 1885.
- Rietschel**, 9, 404.
- Rifle-ball, Speed of a**, 13, 150.
History of, 12, 190.
- Riga**.—A commercial city and port of western Russia. Pop., with its environs, nearly 300,000.
- Rigel**, a bright star, 5, 141.
- Right-angle**, 7, 250.
- Right of investiture**, 10, 260.
- Right of search**, 11, 396.
- Right on time**, 14, 355.
- Righteousness a matter of the will**, 2, 224.
- Rights, Bill of**, 11, 257.
- Rights of a child to be respected**, 2, 219.

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- Rights of others, Respecting, 2, 221.**
- Rigolet's Pass.**—A strait in southeastern Louisiana, connecting Lake Pontchartrain and Lake Borgne.
- Riis, Jacob.**—Born at Ribe, Denmark, 1849. A Danish-American writer on social topics; an active worker for the uplifting of the lower classes.
attempts to sell his dog, 1, 146.
quoted on poor children, 2, 377.
- Riley, Charles Valentine.**—(1843-1895.) A noted entomologist, for many years in the service of the U. S. Government.
- Riley, James Whitcomb.**—Born at Greenfield, Ind., 1852. A noted journalist, poet, and dialect writer, 8, 235.
- Rimini.**—A city of Italy situated northeast of Florence near the Adriatic Sea. Pop., about 12,000.
- Rincon, Antonio del, 9, 254.**
- Rinehart, William Henry.**—(1825-1874.) An American sculptor, 9, 412.
- Ring-billed duck, 4, 217.**
- Ring des Nibelungen, Der.**—A sequence of four musical dramas by Wagner, first played at Bayreuth, 1876.
- Ring-necked pheasant, 4, 127.**
- Rings, Exercises with, 6, 40.**
- Ringworm, Treatment of, 1, 338.**
- Rio de Janeiro.**—The capital and largest city of Brazil, S. A.; it is also the most important seaport and commercial center of that country. Its chief export is coffee. Pop., about 600,000.
- Rio Grande, or Rio Grande del Norte.**—A western river, rising in Colorado and flowing south and southeast into the Gulf of Mexico. Length, about 1,800 miles; navigable, 450 miles.
- Rio Grande jay, 4, 153.**
- Rio Negro.**—River in the United States of Columbia, flows in a south-southeast direction and joins the Amazon at Manaos. Length, 1,000 miles.
- Riparian Rights.**—Rights of an owner of property along a river bank.
- Ripley, George.**—(1802-1880.) An American critic and scholar; one of the chief promoters in the Brook Farm experiment.
- Ripon.**—A manufacturing city of Wis. Pop. (1900), 15,110.
- Rip Van Winkle.**—The hero of one of the stories in the "Sketch Book," by Washington Irving, published, 1819.
- Ristori, Adelaide.**—(1822-1906). Born at Cividale, Friuli. A celebrated Italian tragic actress.
- Ritchie, Mrs. (ANNE ISABELLA THACKERAY.)**—(1838— .) An English novelist, daughter of William Makepeace Thackeray.
- Ritter, Frederic Louis.**—(1834-1891.) A composer, conductor, and musical writer.
- Rivals, Derivation of, 8, 363.**
- "Rivals, The."**—A comedy written by Richard Brinsley Sheridan, produced, 1775.
- River and Harbor Bills.**—The bills passed by congress for harbor improvement in the U. S. The largest appropriation ever made was in 1900, when the sum passed \$25,000,000.
- River duck, 4, 110.**
- River Raisin (Mich.), Battle of.**—On Jan. 22 1830, the Americans under Col. Lewis and Gen. Winchester defeated by 500 British soldiers and 600 Indians under Col. Proctor.
- Rivers a destructive agency in geology, 5, 428.**
- Riverside Park.**—A narrow strip of ground bordering the Hudson River, from 72d St. to 103d St., New York City.
- Rivington, James.**—(1784-1802.) A noted bookseller and Royalist printer of Colonial times.
- Rivoli.**—A village in Venetia, Italy. Here Bonaparte in 1797 gained a great victory over the Austrians, 10, 348; 14, 358.
- Rizzio, or Riccio, David.**—(Killed at Edinburgh, 1566.) A favorite of Mary Queen of Scots, 10, 442.
- Roanoke.**—A city and trading center of Va. Pop. (1900), 21,495.
- Roanoke island.**—An island ten miles in length off the coast of S. C.
- Roanoke Island (N. C.), Capture of, 12, 109.**
- Roanoke River.**—A river of Virginia; length, 450 miles; navigable 150 miles.
- Robbia, Andrea della, 9, 374.**
- Robbia, Luca Della, 9, 373.**
- Robert, Count of Flanders, 10, 258.**
- Robert of Normandy, 10, 261.**
- Robert the Bruce, 10, 263.**
- Roberts, Charles G. D.**—A Canadian author and poet, born in Fredericton, N. B., Canada, in 1860. His father was Rev. Canon G. G. Roberts, an Episcopalian, and his mother was a member of the Bliss family of Loyalists. After graduation he became professor of English at King's College, Windsor, Nova Scotia. Later he removed to New York City where he has since resided. Among his poetical works are; "Orion and Other Poems," "Earth's Enigmas," "New York Nocturnes," etc. His novels include: "Forge in the Forest," "A Sister to Evangeline," "Heart of the Ancient Wood," "Mam'selle," "The Heart that Knows," etc. His best-known animal stories, in which he is a master, is "Kindred of the Wild." He also

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- wrote a "History of Canada." He is a cousin to Bliss Carman.
 On "Camping," 6, 311.
 "Homer Legends," 3, 367.
- Roberts, Frederick Sleigh.**—Born, 1832. Commander-in-chief of the British army.
 in South Africa, 11, 19.
- Roberts' plague,** 5, 18.
- Roberval, Sieur de,** 11, 39.
- Robespierre, Maximilien Marie Isidore.**—(1758-1794.) The principal agitator in the French Revolution of 1793-94, 10, 344.
- Robin,** 4, 158.
 American, 4, 159.
 Eggs of the, 4, 119.
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 Geographical range of the, 4, 159.
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 redbreast, 4, 159.
- Robin, J. French,** botanist, 4, 435.
- Robinia hispida,** 4, 435.
 pseudacacia, 4, 434.
 viscosa, 4, 435.
- Robinson Crusoe.**—The leading character of a story for boys by that name written by Daniel Defoe; published, 1719.
- Robinson, John,** 11, 44.
- Robinson, Rowland,** 1, 240.
- Rob Roy, Robert McGregor, or Campbell.**—(1671-1734.) A famous Scottish outlaw and freebooter, the subject of a romance by Sir Walter Scott.
- Robson, Stuart.**—(1836-1906.) A noted American comedian.
- Rochambeau, Comte de.**—See VIMEURE, JEAN BAPTISTE DONATIEN DE.
- Rochefort, Victor Henri.**—Born, 1830. A journalist, playwright, and radical politician of France.
- Rochester.**—(1) A city of New York; an important railroad center; has many manufacturing and nurseries and an extensive coal trade. Pop. (1900), 162,608. (2) A town of N. H. Pop. (1900), 8,466. (3) A town of Minn. Pop. (1900), 6,843.
- Rochester, Nathaniel.**—(1752-1831.) An American pioneer and patriot; founder of the city of Rochester.
- Rockaway, Rockaway Beach, Far Rockaway.**—Summer resorts on the south coast of Long Island.
- Rock-boring shells,** 5, 430.
- Rock Crystal,** 5, 447.
- Rockefeller, John D.,** on Success, 8, 122.
- "Rocket," locomotive, 8, 211.
- Rockfish,** 4, 296.
 Characteristics of, 4, 296.
 Food of the, 4, 297.
 Home of the, 4, 296.
- Rockford.**—A city of Ill., engaged largely in manufacturing. Pop. (1900), 31,051.
- Rock Island.**—(1) A small city in Illinois on the Mississippi River, notable for the magnificent bridge that spans the river at this point. (2) An island in the Mississippi River opposite the city of the same name, and belonging to the U. S. government. It contains an arsenal and armory, and is used as a public park.
- Rockland.**—(1) A city and seaport of Me. Pop. (1900), 8,150. (2) A town in Mass. Pop. (1900), 5,327.
- Rock, Measure of,** 13, 148.
- Rock Oil,** 5, 225.
- Rockport.**—A seaport of Mass. Pop. (1900), 4,592.
- Rock River.**—Rises in southeast Wis. and empties into the Mississippi. Length, about 200 miles.
- Rocks, Archæan,** 5, 462.
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 Stratified, 5, 459.
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 Volcanic, 5, 460.
 Wearing away of, 5, 429.
- Rock Salt.**—Common salt (chloride of sodium), occurring as a mineral and in solid form. It is found in great masses in America and in many other parts of the world, 5, 187.
- Rocks and Minerals,** 5, 440.
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- Slate, 5, 443.
Sulphur, 5, 449.
- Rockville.**—A city of Conn., having extensive manufacturing interests. Pop. (1900), 7,287.
- Rocky Mountains.**—The principal range of mountains in North America, parallel with the Pacific coast and extending from Alaska to Mexico. Among its principal peaks are Mt. St. Elias, marking the southern boundary of Alaska, Mount Harvard, Pike's Peak, and Mount of the Holy Cross. Among the special features of the range are geysers, cañons, and the remarkable rock formations near Colorado Springs known as the "Garden of the Gods."
- Rocky Mountain Sheep, The,** 4, 31.
- Rod,** 13, 147.
- Rodents,** 4, 11.
- Roderick, the last of the Goths,** 10, 238.
- Rodgers, Christopher Raymond Perry.**—(1819–1892.) A rear-admiral in the U. S. navy.
- Rodgers, John.**—(1812–1882.) An admiral distinguished in the Civil War. Made rear-admiral, 1869.
- Rodin, French sculptor,** 9, 402.
- Rodman, Thomas Jackson,** 12, 109.
- Rodney, Cæsar,** 11, 131.
- Rodrigo Diaz, the Cid,** 19, 243.
- Roebling, John Augustus.**—(1806–1869.) An American civil engineer; designer of the Brooklyn Bridge, New York and Brooklyn.
- Roentgen, or X-rays,** 5, 321.
referred to, 14, 27.
- Rogers, John.**—Born at Salem, Mass., 1829. A sculptor, best known by the small groups known as the "Roger's Statuettes." Died 1905.
- Rogers, Randolph.**—American sculptor, 9, 412.
- Rogers, Robert,** 11, 64.
- Rogers, William Augustus.**—(1832–1898.) A noted American astronomer and physicist.
- Rogue River.**—A river of Oregon, length about 200 miles.
- Rois Fainéants,** 10, 235.
- Roland, Madame,** 10, 418.
- Rolfe, John,** 11, 42.
- Rolfe, William James.**—Born in Newburyport, Mass., 1827. A noted Shakespearean student.
- Roller Polo,** 6, 99.
- Roller Skating,** 6, 310.
- Roman and Grecian Mythology,** 10, 85.
- Roman Empire, Extent of,** 10, 226.
History, 10, 208.
home ties, 1, 6.
pottery, 1, 217.
year, 13, 90.
- Romanzoff, Cape.**—A cape on the western coast of Alaska.
- Romanzoff Mountains.**—A range of mountains in northern Alaska.
- Rome.**—A manufacturing city of Ga. Pop. (1900), 7,291.
- Rome.**—A city of New York, having extensive manufacturing and dairy interests. Pop. (1900), 15,343.
- Rome, History of,** 10, 208.
Sacked by Gauls, 10, 212.
Huns, 10, 402.
Seven hills of, 10, 209.
- Romeike, Henry,** 8, 205.
- Romesh Dutt's Ramayana,** 3, 320.
- Romney, George,** 9, 280.
- Romulus,** 10, 208; 14, 23.
Augustulus, 10, 232.
- Rondout.**—A village of New York incorporated with the city of Kingston in 1872.
- Rook, The,** 4, 147.
- Rookwood Pottery, The.**—A pottery located at Cincinnati, O., which produces highly artistic ware of true faience variety.
- Room for nursery,** 2, 38.
- Roon, Prussian minister of war,** 11, 6.
- Roosevelt, Theodore,** 12, 359.
Election of, 12, 182.
On "Citizen and Public Man," 12, 411.
Succeeds McKinley, 12, 175.
- Root, Elihu B.,** 12, 181.
Secretary of State, 12, 184.
- Root, George Frederick.**—(1820–1895.) A musical composer and publisher. Especially interested in public-school music.
- Roots of plants,** 4, 394.
- Rope, Hemp,** 5, 86.
Making of, 5, 86.
Manila, 5, 87.
or pole, Exercises on, 6, 44.
- Roseate spoonbill,** 4, 226.
- Rose, Culture of the,** 5, 47.
Fabled origin of the, 1, 199.
National flower of England, 1, 200.
- Rose Bay,** 5, 70.
- Rosebery, Earl of.**—Born, 1847. A prominent English statesman and scholar. Premier in 1894, after which he disappeared from political life, 10, 383.
- Rose-breasted grosbeak,** 4, 188.
- Rose bug, To exterminate,** 5, 48.
- Rosecrans, William Starke,** 12, 110.
- Rose Laurel,** 5, 70.
- Rosemary,** 5, 74.
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- Rosetta Stone,** 10, 178.
- Rosewood,** a decorative wood, 1, 36.
- Rosh-Chodesh,** 13, 102.

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- Rosh-Hashonah**, 13, 102.
- Ross, George**, 11, 131.
- Ross, Robert**, 11, 258.
- Rossellino, Antonio**, 9, 374.
- Rossetti, Dante Gabriel**, 9, 286, 288.
Style of, 8, 384.
- Rossiter, Thomas Pritchard**.—(1817-1871.)
An American historical painter.
- Rothermel, Peter Frederick**.—(1817-1895.)
An American painter.
- Rothschild, Alfred Charles de, I**, Seamore Pl.,
Mayfair, London (1832 —), is member of the
firm of N. M. Rothschild and Sons; formerly
a director of Bank of England; well known
as a collector of art treasures and pictures; is
a trustee of the National Gallery, 14, 92, 181.
- Rothschild, Anselm Mayer**.—(1743-1812.)
German-Jewish banker, founder of the Roths-
child banking system.
- Rothschilds**.—A famous Jewish banking-house
at Frankfort-on-the-Main, founded during the
latter half of the 18th century.
- Rotten boroughs**, 10, 370.
- Roumania**.—A county of southeastern Europe
lying along the southern borders of Austria-
Hungary. In 1861, the two principalities of
Wallachia and Moldavia were united under
the name of Roumania. It was proclaimed
independent from Turkey in 1877, which was
confirmed by the Congress of Berlin in 1878.
It has an area of 50,700 square miles and a
population of about 6,400,000. The chief
towns are Bucharest and Jassy. Carol I. is
the king. He was born in 1839, and pro-
claimed king in 1881.
- Roumania, Kingdom of**, 11, 12.
- Roundheads**.—Members of the Parliamen-
tarian or Puritan party during the English Rev-
olution.
- Round Robin**.—A paper, usually a protest, to
which the signatures are written in a circle so
that no one name may be more prominent
than the rest. For the celebrated Cuban round
robin, see ROOSEVELT, THEODORE, 12, 363.
- Round Table, The**.—The legends of the round
table, closely connected with those of the Holy
Grail, represent it as given together with 100
knights, as a wedding present to King Arthur
by the father of his queen Guinevere. Arthur
founded the Order of the Round Table upon
the advice of Merlin. The general subject has
been treated much in romance and in poetry,
prominently by Tennyson.
- Round writing alphabet**, 7, 274.
- Rous, Thomas**, maker of stoneware, 1, 220.
- Rouss, Charles Broadway**, on a college educa-
tion, 8, 81.
success, 8, 122.
- Rousseau, Jean Jacques**.—(1712-1778.) Cele-
brated Franco-Swiss philosopher.
- Rousseau, Pierre Etienne Théodore**.—(1812-
1867.) Noted French landscape-painter, 9,
268, 269.
- Rowan, Andrew S.**, 14, 98.
- Rowing**, 6, 331.
- Rowland, Henry Augustus**.—Born at Hones-
dale, Pa., 1848. A noted physicist; professor
of physics at Johns Hopkins University.
- Roxbury**.—A city of Mass. Incorporated with
Boston, 1868.
- Royalists**.—In English history, the followers of
Charles I. In American history the adher-
ents of the British Government during the
American Revolution. In French history the
supporters of the House of Bourbon against
the revolutionary and later governments.
- Royall, Isaac**, 11, 64.
- Royal Society, The**.—An association founded
in London about 1600 for the advancement of
scientific research, especially in the physical
sciences.
- Rubber**, How made, 5, 192.
India, 5, 192.
Purification of crude, 5, 192.
Sap, 5, 192.
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Vulcanizing, 5, 192.
- Rubens, Peter Paul**, 9, 291.
- Ruble**, Russian gold, 13, 154.
- Rubus, fruticosus**, 5, 53.
- Ruby**, July birthstone, 1, 196.
of King Solomon, 1, 195.
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- Ruby-throated humming-bird**, 4, 200.
- Rude, François**, 9, 400.
- Rudolph of Habsburg**, 10, 275; 14, 265.
- Ruffed Grouse**, 4, 125.
- Ruggles, Timothy**, 11, 131.
- Rugs and carpets**, 1, 32.
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- Rump Parliament**, 10, 323.
- Rumpelstitzkin**, German fairy tale, 3, 98.
- Rumplers fowl**, 4, 107.
- Rumsey, James**, 5, 277.
- Rupee, Indian**, 13, 154.
- Ruric**, founder of Russia, 10, 328.
- Rush, Benjamin**, 11, 131.
- Ruskin, John**.—(1819-1900.) The most emi-
nent English art critic and author of his time.

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Ruskin, 14, 186, 305.

quoted on Bellini, 9, 226.

Style of, 8, 377.

Suggested for reading to children, 7, 89.

Russell, Annie, on "Actresses," 7, 355.

Russell, Henry.—Born, 1810. An English-American baritone and composer. Author of many songs popular in their day; among them, "Cheer, Boys, Cheer," "A Life on the Ocean Wave," "There's a Good Time Coming," etc.

Russell, John, first Earl Russell.—(1792-1878.)

English orator, author, and statesman, 10, 370.

Russell, William, Lord Russell.—(1639-1683.)

English statesman.

Russell, William Clark.—Born at New York, 1844. A noted novelist; son of Henry Russell the composer, 8, 240.

Russia.—An empire that embraces all of eastern Europe and, including Siberia, extends across the northern portion of Asia to the Yellow Sea. The government is an absolute monarchy vested in the czar, and the administration is by council, or a bureaucracy. The most famous and powerful of its rulers was Peter the Great, whose policy for the extension of the empire has never ceased to be the dominating influence. The Russian people are mainly agricultural, and wheat is the leading export. The state religion is the Greek (or Eastern) Church. The principal capital is St. Petersburg, Moscow being the second capital and coronation city. Area, 8,660,282 sq. miles. Pop., 130,000,000.

Expansion in Siberia, 11, 25.

in the sixteenth century, 10, 328.

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secures the left bank of the Amur, 11, 26.

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Black-rust, 5, 97.

Wheat-rust, 5, 97.

Rutabaga, 5, 78.

Rutgers, Henry, 11, 131.

Rutherford, Griffith, 11, 131.

Rutherford, Lewis Morris.—(1816-1892.) A distinguished physicist.

Rutland.—A city of Vermont; noted for its marble quarries; manufacturing interests. Pop. (1900), 11,499.

Rutledge, Ann.—(See LINCOLN, ABRAHAM.)

Rutledge, Edward, 11, 131.

"Ruy Blas."—Drama written by Victor Hugo; published, 1838.

Ryde.—A fashionable summer resort in the Isle of Wight, England.

Ryder, James F., 14, 49.

Rye.—Seaport, Sussex Co., England; one of the ancient Cinque Ports.

Rye, 5, 88.

Ryswick, Treaty of, 10, 318.

S

Saale, Saxon, or Thüringen.—A tributary of the river Elbe; rises in the Fichtelgebirge, Bavaria, and joins the Elbe 19 miles south-east of Magdeburg. Length, about 225 miles.

Saalfeld.—A town in the duchy of Saxe-Meiningen, Germany, on the river Saale; has manufacturing interests.

Saarbrücken, Battle of, 11, 9.

Sabine.—(1) A river rising in northeastern Texas, and flowing southeast into the Gulf of Mexico. Length, 500 miles. (2) Lake. An expansion of the river Sabine near its mouth, about 18 miles long. (3) Pass. A short and narrow passage between Sabine Lake and the Gulf of Mexico.

Sabine Cross Roads.—A locality in northwestern Louisiana where the Federals under Gen. Banks were defeated, in 1864, by the Confederates under Gen. Taylor.

Sabines.—An ancient people of Central Italy, dwelling principally among the mountains north of Rome. Their chief city was Reate, 10, 208.

Sable.—(1) Cape. The southernmost point of the mainland of Fla. (2) The southwestern extremity of Nova Scotia. (3) An island off the coast of Nova Scotia, to which it belongs; it contains a life saving station.

Sable, Alaska, 4, 49.

Sable antelope, 4, 31.

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Sable Island pony, 4, 13.

Saccharimeter, 5, 236.

Sachs, Hans.—(1494-1576.) A German poet, a shoe-maker by trade, the most celebrated of the mastersingers.

Sackett's Harbor.—A village of New York, situated on an arm of Lake Ontario; once an important naval and ship building station. Americans repulsed an attack by the British here in 1813.

Sackett's Harbor (N. Y.), Attack on, 11, 258.

Sackville-West, Sir Lionel Sackville.—Born, 1827. A British diplomatist, formerly minister to the U. S. of America.

Saco.—(1) A city in Me.; coast trade and manufacturing interests. Pop. (1900), 6,122. (2) A river in N. H. and Me., empties into the Atlantic through Saco Bay. (3) A bay, on the east coast of Me.

Sacramento.—(1) The capital of California and third city of the state. It is a railway center, has large manufacturing interests, and an extensive export fruit trade. Pop. (1900), 29,282. (2) The longest river in California; rises in the Sierra Nevada Mountains and empties into the Pacific. Length, 500 miles.

Sacred ibis, 4, 229.

Sacrum, 1, 273.

Sacta of India, 10, 3.

Sadi.—(About 1190-1291 A. D.) A celebrated Persian poet, now honored as a saint. He was born and died at Shiraz where his tomb is still visited.

Sadowa, Battle of, 10, 379; 11, 7.

Safe deposit companies, 7, 483.
box, 7, 484.

Safer, 13, 103.

Safety-lamp, Davy, 5, 229.
Matches, 5, 196.

Saffron, 5, 57.

Sage.—A genus of plants of the natural order *Labiata*; there are many species of it. The sage commonly known is a half shrubby plant, attaining a height of about 2 feet. It has ovateoblong or lanceolate, finely-notched leaves, of a whitish-gray color, and racemes of purplish-blue. The odor is strong and penetrating and the taste bitter. The oil of the plant is sometimes used in liniments; the leaves are used for culinary purposes, 5, 75.

Sage, Russell, on "Business," 13, 65.

Mrs., on "Women in Business," 7, 434.

Sag Harbor.—A seaport and summer resort, on the eastern coast of Long Island.

Saginaw.—A city in Mich., noted for its lumber and salt manufactures. Pop. (1900), 42,345.

Sagittarius (The Archer).—See CONSTELLATIONS, 5, 144.

Sago.—A food substance derived from certain species of palms growing in New Guinea and in the Indian Archipelago.

Saguache, or Sawatch Range.—A Range of the Rocky Mountains, in central Colo.

Saguara, 5, 92.

Saguenay.—A river in the province of Quebec, Can., it flows into the St. Lawrence, 115 miles below Quebec.

Saguntum, 10, 215.

Sahara Desert.—The largest desert in the world; extends from east to west nearly across the northern part of Africa. Area, about 2,500,000 sq. miles.

Sailfish, 4, 272.

Sailing punt, Making a, 7, 232.

Sailor's Creek (Va.), Battle of, 12, 113.

Sailor, The, by Rudolph Jameson, 13, 408.

St. Albans.—(1) A city in Hertfordshire, England, noted for its cathedral. Was one of the chief settlements of the early Britons and Romans, and it was here that the first battle in the Wars of the Roses was fought. (2) A town of Vermont having extensive dairy industries. Pop. (1900), 6,239.

Battle of, 10, 274.

St. Andrew, 13, 91.

Cross of, 13, 91.

St. Andrews.—A city and seaport of Scotland, the seat of a university, situated in Fifeshire on the North Sea. Pop., about 7,000. (2) A seaport city of New Brunswick. (3) Bay, an inlet of the Gulf of Mexico on the coast of Fla.

St. Anthony, Falls of.—A cataract in the Mississippi River, opposite the city of Minneapolis; valuable for manufacturing purposes. About 20 feet in height.

St. Augustine.—A city of Florida; an important seaport and health resort; the oldest town in the U. S. Pop. (1900), 4,272.

St. Bartholomew, Massacre of.—A massacre of the Huguenots in Paris, 1572, 10, 295, 410.

St. Bernard, 10, 258.
dog, 4, 18.

St. Bernard, Great.—A pass over the Swiss Alps, leading from the Rhone valley to Italy, noted for the hospice maintained for the relief of travelers.

St. Catherines.—(1) The county seat of Lincoln Co., Ontario, Can. It is noted for its mineral wells. Pop. (1901), 9,946. (2) An island 15 miles long, off the coast of Georgia.

St. Charles.—The capital of Charles Co., Missouri. Pop. (1900), 7,982.

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St. Clair.—A town of Mich. Pop. (1900), 2,543.

(2) A borough of Schuylkill Co., Pa., important because of the rich coal mines in its vicinity. Pop. (1900), 4,638. (3) A lake lying between Mich. and Ontario, Can., 28 miles long, and from 12 to 25 miles wide. It has its outlet through Detroit River into Lake Erie. (4) A river, the outlet of Lake Huron into Lake St. Clair. Length, 33 miles.

St. Clair, Arthur, 11, 131.

St. Croix River.—(1) A river on the boundary between Me. and New Brunswick. Length, 75 miles. (2) A river in northwestern Wis.; the boundary between Wis. and Minn. It empties into the Mississippi. Length, 175 miles.

St.-Denis.—(1) In France, an important manufacturing and commercial city in the department of Seine. (2) A seaport and the capital of Réunion Island in the Indian Ocean.

St. Elias, Mount.—A volcanic peak in Alaska, 18,023 feet high.

St.-Etienne.—In France, the capital of the department of the Loire and one of the leading manufacturing cities of the country. It has great coal-mining interests and is a railroad center. Pop., about 150,000.

St. Francis.—(1) A cape on the peninsula of Avalon in the southeastern part of Newfoundland. (2) A river rising in Missouri and flowing into the Mississippi. Length, 450 miles. (3) A river in the province of Quebec, Canada. Length, about 175 miles. (4) A lake 30 miles long formed by the expansion of the St. Lawrence below the N. Y. and Canada boundary. (5) A lake in Canada, 60 miles south of Quebec, having its outlet into the St. Lawrence.

St. Gall.—The capital of the canton St. Gall, in Switzerland; one of the leading commercial and manufacturing cities of the country. Pop., about 30,000.

St.-Gaudens, Augustus, 9, 413.

St. Gothard tunnel, 5, 421.

St. Helena.—An island of the South Atlantic, a possession of Great Britain; celebrated as the place of imprisonment of Napoleon, 1815-21. Area, 47 sq. miles. (2) An island on the coast of S. C., noted for the production of sea-island cotton, 14, 263.

Napoleon at, 10, 351.

St. Helen's Mount.—A volcanic mountain in the state of Washington; one of the highest peaks in the Cascade Range.

St. John.—A city of New Brunswick; it has a fine harbor, shipbuilding and fishing industries, and an extensive foreign and coast trade. Pop. (1901), 40,711.

St. John's.—The capital and a seaport of New-

foundland; has fishing industries; manufactures cod and seal oils. Pop., about 27,000.

St. Johnsbury.—The county seat of Caledonia Co., Vt. It has numerous and extensive manufactures. Pop. (1900), 7,010.

St. John's-wort, 5, 17.

St. Joseph.—(1) An important city, capital of Buchanan Co., Mo., opposite the eastern border of Kansas. Pop., 102,979. (2) A river rising in southwestern Mich., and flowing in a western direction empties into Lake Michigan at St. Joseph. (3) An island about 20 miles long situated in the outlet from Lake Superior into Lake Huron. It belongs to Canada. (4) A bay on the western coast of Florida 120 miles southeast of Pensacola.

St. Lawrence.—(1) One of the principal rivers of North America, the outlet of the Great Lakes. It is navigable to Montreal and is 750 miles long. (2) An arm of the Atlantic extending into the Dominion of Canada at the mouth of the St. Lawrence River. (3) A cape on the northern extremity of Cape Breton Island. (4) An island belonging to Alaska in the Bering Sea; 100 miles long.

St. Louis.—The largest city in Mo., and the fourth in size in the U. S. One of the chief railroad and commercial centers of the country. Founded by the French in 1764. Pop. (1900), 575,238. (2) A river in northeastern Minn., flowing into Lake Superior. Length, 200 miles. (3) A cape on the southernmost point of southern California.

St. Mary Cape.—(1) The southern point of Madagascar. (2) A cape in the southeastern part of Newfoundland. (3) A cape at the western extremity of Nova Scotia.

St. Mary's River.—(1) The outlet of Lake Superior into Lake Huron. Length, 55 miles. (2) A river between Georgia and Florida, flowing into the Atlantic. Length, about 150 miles. (3) A river of Ohio and Indiana which unites with St. Joseph's to form the Maumee. Length, about 100 miles.

St. Matthew.—A small island in Bering Sea belonging to Alaska.

St. Maurice.—A river in Quebec, Can., flowing into the St. Lawrence. Length, 350 miles.

St. Nicholas, 13, 103.

St. Paul.—The Apostle of the Gentiles, yet "A Hebrew of the Hebrews," was born in Tarsus, in Cilicia, probably three or four years after the birth of Christ. Until his conversion he was known by the name of Saul. During his early life, he was a strong adherent of Judaism. After his conversion, he was, to an extent, at variance with the other apostles who maintained the ground that it was necessary to

observe a certain adherence to Hebrew principles. For this reason he was delegated to preach to the heathen, and this accounts for his journey into foreign countries. He finally went to Rome where he was lost sight of, 10, 259.

St. Paul.—The capital of Minn., situated on the Mississippi River; an important manufacturing and railroad center. Pop. (1900), 163,065.

St. Paul's.—A famous cathedral in London; founded in 1675, on the site of an older cathedral. Designed by Sir Christopher Wren, 5, 420.

St. Peter's.—The largest and grandest temple of worship in the world is St. Peter's Cathedral at Rome. It stands on the site of Nero's circus, in the northwest part of the city, and is built in form of a Latin cross. The total length of the interior is 613½ feet; transept 446½ feet; height of nave, 152½ feet; diameter of cupola, 192 feet; height of dome from pavement to top cross, 448 feet. The great bell without the hammer or clapper weighs 18,600 pounds, or over 9¼ tons. The foundation was laid in 1540 A. D. Forty-three Popes lived and died during the time the work was in progress. It was dedicated in the year 1626, but not entirely finished until the year 1880. The cost in round numbers is set down at \$70,000,000, 5, 420.

St. Petersburg.—The capital and largest city of the Russian empire. Founded by Peter the Great in 1703. A manufacturing, commercial, and railroad center. Pop., about 1,267,023.

St. Quentin, Battle of, 10, 294.

Saint-Saëns, Charles Camille.—Born, 1835. A French pianist, composer, and musical critic, famous chiefly for his orchestration.

St. Swithin's Day, 13, 101, 104.

St. Valentine's Day, 13, 101, 105.

St. Vincent.—(1) A small island of the West Indies belonging to Great Britain; capital, Kingston. (2) An island in the Gulf of Mexico, near the coast of Florida.

Battle of, 10, 352.

St. Vitus's Dance, 9, 182.

Saivas, 10, 17.

Sake, Japanese liquor, 5, 88.

Sal ammoniac, 5, 208.

Sala, George Augustus Henry.—(1828-1895.)

A noted English journalist and correspondent.

SALADIN.—(1137-1193.)

Zenghi and his son Noureddin, after the breaking up of the empire of the Suljuk Turks, had acquired a wide dominion in Syria and Mesopotamia and founded a dynasty of sultans. When Noureddin found an opportunity (1162-68) to interfere in the affairs of Egypt, Saladin, who was then a young man of society

and pleasure at Damascus, went with his uncle-Shirkoh's expedition. He soon became the representative of the sultan and the grand vizier of the caliph. In 1171, he managed to have the caliph quietly deposed, and won the country over to the orthodox Mohammedan sect. He prudently waited for an opportunity to throw off his allegiance to the sultan of Damascus.

He proclaimed himself sultan of Egypt and began his reign with a series of brilliant successes. He restored Egypt to an important place among the nations, and by his wars made it the nucleus of a great empire. He also encouraged letters and arts.

He had already developed great talents as a ruler, and also great ambitions, and at the death of Noureddin, in 1174, he occupied Damascus as the guardian of Noureddin's son, and soon seized the sultan's throne and (after a short period of civil war) made himself master of the greater portion of Syria. Later, though he met with reverses at first, he conquered Jerusalem and expelled the Christians from all Palestine except Tyre and a small strip of coast.

In his defense against the Third Crusade, and by a character which was superior to that of his Christian antagonists, he won renown in the western world and became a great figure in history.

While managing his continual wars, he was interested in the welfare of Egypt, and erected many public works there.

He died at Damascus about a year after the treaty which closed the Third Crusade. He died almost penniless, and with neither houses nor goods nor lands. The money for the burial was borrowed. He had emptied his treasury in his religious cause and by his open-handed charity.

He was buried at Damascus with his sword beside him. The ordinary bier was covered with a simple striped cloth. The ceremony was as simple as that of a pauper's funeral. There was no poet's dirge and no preacher's oration; but the multitude, who thronged about the gate, wept with great grief.

Saladin's power was due to his love for his subjects. He won his purposes by kindness, not by fear or severity. To his son, whom he appointed to a high office, he said: "Abstain from the shedding of blood, trust not to that, for blood that is spilt never slumbers. Seek to win the hearts of thy people, and watch over their prosperity; for it is to secure their happiness that thou art appointed by God and by me. Try to gain the hearts of thy emirs and ministers and nobles. I have become great as

Saladin — *Continued.*

I am because I have won men's hearts by gentleness and kindness."

His whole life was simple, laborious, and even ascetic. He despised luxury and self-indulgence. He was modest and courteous. He was noble, patient, and kind. He could not bear to have his servants beaten. Every day he gave careful attention to petitions or complaints. As a judge, he was impartial.

He was especially fond of children. A strong point in his nature is illustrated by the touching story of the woman who came from the Crusaders' camp at Acre seeking her baby, which had been carried away by the Saracens. When the pickets led her to him, he was greatly touched by her anguish, and the tears stood in his eyes. He ordered the camp to be carefully searched and had the girl safely restored to her mother.

His great clemency, when his victories were crowned by the fall of Jerusalem, is mentioned by the Christian historians. He was generous and merciful to the vanquished; and was known as a man who kept his word.

He was courageous, and magnanimous. He had great military power and great control over himself.

Above all things, he was devout in his religion. He was a religious fanatic. Though gentle in his social life, he was stern and rigid in his belief. Though naturally averse to bloodshed, he did not hesitate to fight those who were infidels to his religion. He dreamed of following the Franks over the sea and conquering them until there should not be a single unbeliever on the face of the earth, **10**, 258.

Salado, Rio (Salt River).— (1) A river in Arizona, the chief tributary of the Gila. (2) A river in the Argentine Republic, S. A. The water of these rivers is salty.

Salamanca.—Capital of province of the same name, in western Spain, celebrated for its cathedral and (formerly) for its university. Pop., nearly 25,000.

Salamis, **10**, 188, 197.

Salaries, Congressional.—These are paid out of the treasury of the U. S., and the amount is fixed by law passed by Congress itself. Since 1874 both senators and representatives have received \$5,000 yearly, and a mileage of 20 cents. But the President of the Senate, who is also Vice-president of the U. S., and the speaker of the House receive \$8,000 yearly.

Salary Grab.—The name popularly applied to an act of Congress, Mar. 3, 1873, materially

increasing the salaries of the President, Vice-president, members of Congress, Justices of the Supreme Court, and other Federal officials. The following day a supplementary act was passed, making the law retroactive in the case of members of Congress, thus voting to pay themselves an increase of \$2,500 a year from Mar. 4, 1871. The act aroused a storm of public indignation. Many congressmen who voted for the act were defeated for reelection, and the next year the act was repealed, except such provisions as related to the President and Justices of the Supreme Court.

Sale, George, on Mohammed, **3**, 387.
quoted on the Koran, **3**, 386.

Salem.— (1) A town of Mass., the oldest in the state; formerly noted for its foreign commerce; the birthplace of Hawthorne. Pop. (1900), 35,956. (2) A town of N. J., near Philadelphia. Pop. (1900), 5,811. (3) A city in eastern Ohio. Pop. (1900), 7,582. (4) The capital of Oregon; it has numerous manufactures. Pop. (1900), 4,258. (5) A town of Va. Pop. (1900), 3,412.
witchcraft in, **11**, 46.

Sales, Account, **13**, 7.

Salesman, Qualifications of a good, **13**, 381.

Salesmanship, **13**, 374.

Salic law, **10**, 266.

Salii, **10**, 98.

Saline River.— (1) A river in southeastern Arkansas; length, 200 miles. (2) A river in southern Illinois, flowing into the Ohio. (3) A river in Kan. Length, 300 miles.

Salisbury, The Marquis of.—Born, 1830. British statesman. In 1880 he succeeded Beaconsfield as leader of the conservative party. Three times premier of England.

Salisbury Island.—In the western part of Hudson's Strait, British America.

Salix alba, **4**, 442.

amygdaloides, **4**, 441.

Babylonica, **4**, 439.

annularis, **4**, 440.

Bebbiana, **4**, 442.

cordata, **4**, 442.

fragilis, **4**, 441.

lucida, **4**, 441.

nigra, **4**, 440.

Sallust, Caius Crispus.— (86?–34 B. C.) A noted Roman historian.

Salmon.— (1) A river in Idaho; length about 400 miles. (2) Falls. A cataract of the Snake River in Idaho.

Salmon, The, **4**, 293.

Catching, **4**, 295.

Characteristics of, **4**, 293.

Geographical range of, **4**, 293.

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Salmon, The — Continued.

- Habits of, 4, 293.
- Home of the, 4, 293.
- Land-locked, 4, 295.
- Reproduction of, 4, 294.
- Size of the, 4, 295.
- Young, 4, 294.
- Salmon River Mountains.**—A part of the Rocky Mountain range, in Idaho.
- Salpa, 4, 374.**
- Salsola** process of making soda, 5, 187.
- Salt, Chemical nature of, 5, 186.**
 - Common, 5, 186.
 - mines in the world, Largest, 5, 187.
 - Rock, 5, 187.
 - Sources of, 5, 186.
 - Uses of, 5, 187.
- Saltillo (Mexico).**—The capital of the State of Coahuila, near Buena Vista. Pop., about 25,000.
- Salt Key Bank.**—A shoal lying south of Florida.
- Salt Lake City.**—The capital of Utah; founded by the Mormons in 1847; the headquarters of Mormonism. Pop. (1900), 53,531.
- Saltpeter, 5, 203.**
 - Chili, 5, 205.
- Salts, Names of, 5, 173.**
- Saltus, Edgar Evertson.**—Born at New York, 1858. A novelist and miscellaneous writer.
- Salt-water Marsh Hen, 4, 131.**
- Saluda.**—A river of S. C., which unites with the Broad to form the Sangaree. Length, 200 miles.
- Salvador.**—The smallest republic of Central America; exports sugar, coffee, indigo, and other tropical products. Pop. (made up of Indians, mixed races, a few whites, and negroes), about 800,000.
- Salvage, 13, 191.**
- Salvator Rosa, 9, 253.**
- Samana.**—(1) A bay on the eastern coast of the island of St. Domingo. (2) A seaport on the Dominican Republic on Samana Bay.
- Samaria, 10, 184.**
- Sambro Cape.**—A cape on the southern coast of Nova Scotia, south of Halifax.
- Sambucus, 5, 1.**
- Samir, 1, 194.**
- Samnite Wars, 10, 213.**
- Samoan Islands.**—A group of South Pacific islands divided between the United States and Germany. Capital, Apia. It was here that Robert Louis Stevenson spent the last years of his life.
 - Division of the, 11, 20.
- Samoneff, 9, 411.**
- Samos.**—An important island of the Ægean Sea, separated by a narrow strait from Asia

- Minor. Capital, Vathy; chief exports wine and raisins.
- Samoset, 11, 64.**
- Sampson, William Thomas.**—A naval commander; sketch of, 12, 364; 13, 259.
- Sam Slick.**—A pseudonym of T. C. Haliburton.
- Samuel, Saul, and David.**—(Arabic legend), 3, 283.
- San Antonio.**—(1) One of the chief commercial cities of Texas; an important railroad center. Pop. (1900), 53,321. (2) A cape of the Argentine Republic. (3) A cape on the coast of Spain, extending into the Mediterranean Sea. (4) A cape on the western coast of Cuba. (5) A river of Texas; length about 200 miles.
- San Bernardino.**—(1) The capital of the county of the same name in California. Pop. (1900), 6,150. (2) The highest mountain in the Coast Range, Cal., 11,600 feet high.
- San Blas.**—(1) A cape on the southern coast of Fla. (2) A bay on the northern coast of Panama; an arm of the Caribbean Sea.
- Sancho I., of Portugal, 10, 285.**
- Sancho II., of Portugal, 10, 286.**
- Sanchoniathon, 10, 80.**
- Sancho Panza.**—One of the leading characters in Cervante's "Don Quixote."
- San Cristobal.**—A city of Mexico, founded in 1528. Pop., 12,000.
- Sand as a plaything, 2, 124.**
 - the oxide of silicon, 5, 199.
- Sand, George** (*Nom de plume* of ARMANDINE LUCILE AURORE DUPIN, Baroness DUDEVANT).—(1804-1876.) A prominent French novelist and playwright, especially noted for her brilliant conversation, 9, 101.
- Sandalwood, 5, 7.**
 - Red, 5, 7.
 - Venezuelan, 5, 7.
 - Yellow, 5, 7.
- Sandby, Paul, 9, 281.**
- Sanders Creek (S. C.), Battle of, 11, 132.**
- Sanderson, Nicholas, 8, 27.**
- San Diego.**—A coast city of Cal. noted for its fine harbor. It has extensive shipping interests and is a popular health resort. Pop. (1900), 17,700. (2) A cape on the eastern coast of Terra del Fuego.
- Sand-hill crane, 4, 222.**
- Sandpaper, 7, 185.**
- Sand pike, 4, 305.**
- Sandpiper, 4, 132.**
 - Bartramian, 4, 129.
 - Curlew, 4, 133.
 - Least, 4, 132.
 - Pectoral, 4, 133.
 - Red-backed, 4, 133.

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Sandpiper,— *Continued.*

Semi-palmated, 4, 133.

Teeter-tail, 4, 133.

Tip-up, 4, 133.

Sand-snail, 4, 372.

Sandstone, 5, 441.

Sandusky.—(1) A city of Ohio, on Sandusky Bay; an important port and railroad terminus, and has extensive trade in lumber and fish. Pop. (1900), 19,664. (2) Bay. An arm of Lake Erie, 20 miles in length, near Sandusky. (3) A river in Ohio, flowing into Sandusky Bay. Length, 125 miles.

Sandwich.—(1) A town and summer resort of Mass. (2) Bay, an inlet on the eastern coast of Labrador. (3) Islands. See HAWAII.

Sandwich Islands.—See HAWAIIAN ISLANDS.

Sandy Hook.—A strip of beach in N. J. extending into the lower part of New York Bay. It has a beacon light and a light house and is used as a proving ground for ordnance by the U. S. Government. (2) Bay. An arm of New York Bay, west of Sandy Hook.

San Filipe.—(1) A town of Chile, near Valparaíso. Pop., about 12,000. (2) A town of Venezuela. Pop., about 7,000. (3) A tribe of North American Indians, in New Mexico.

San Francisco.—A city and seaport of California; the largest city on the Pacific coast. It has a magnificent harbor; considerable manufacturing interests; and exports gold, silver, wheat, flour, etc. It has a U. S. mint. Pop. (1900), 342,782.

San Francisco.—(1) A large river of Brazil; about 1,800 miles in length; navigable for several hundred miles. (2) A small island on the coast of southern Brazil.

San Francisco Bay.—A large inlet of the Pacific Ocean on the coast of California; connected with the ocean by a strait called the Golden Gate.

Sangamon River.—A river in Illinois flowing into the Illinois River. Length, 220 miles.

San Gil, or **St. Giles**.—A town of New Granada, South America. Pop., 10,000.

Sangreal, 3, 442.

Sangster, Margaret, 1, 265.

San Jacinto, Battle of.—Fought April 21, 1836 on the banks of the San Jacinto River between the Mexicans under Gen. Santa Anna and the Texans under Gen. Houston. Anna was defeated and captured.

San Jacinto River.—A river in Southern Texas which empties into Galveston Bay. Length, 120 miles; navigable, 45 miles.

San Joaquin.—A river of California which rises in the Sierra Nevada Mountains and flows

into the Sacramento. Length, 350 miles; navigable, 50 miles.

San Jose.—(1) The capital of Santa Clara county, California. Pop. (1900), 21,500. (2) The capital and a seaport of Costa Rica, Central America. Pop., about 35,000.

San Juan.—(1) The capital of the province of San Juan, Argentine Republic. Pop., about 12,000. (2) The capital of the island of Porto Rico. Pop., 27,000. (3) A locality in Cuba near Santiago, captured by the U. S. troops, July 1, 1898. (4) A cape at the southeastern extremity of Porto Rico. (5) A group of islands in the Gulf of Georgia belonging to the state of Washington. (6) A range of the Rocky Mountains in Col.

San Juan de Ulúa, or **Ulloa**.—A fort, built in the 17th century, on a small island of the same name protecting the harbor of Vera Cruz.

San Juan River.—(1) A river of Central America which carries the waters of Lake Nicaragua to the Caribbean Sea. (2) A river in southern Bolivia, 300 miles long. (3) A river in the province of San Juan, Argentine Republic. Length, 250 miles.

Sankey, Ira.—Born, 1840. A well-known musical evangelist and song writer; associated with Dwight L. Moody in his work.

San Lorenzo Cape.—A cape on the western coast of Ecuador.

San Lucas, or **St. Lucas Cape**.—The southernmost point of Lower California.

San Luis.—The capital of the province of San Luis, in Argentine Republic. Pop., about 20,000.

San Luis Park.—The largest of the Rocky Mountain parks; in Col. and Mex.; 150 miles long.

San Mateo, Battle of, 12, 186.

San Miguel.—(1) A town in Guanajuato, Mexico. Pop., 15,000. (2) A town in Salvador, Central America, the chief trading town of the country. Pop., 10,000. (3) An eastern arm of the Bay of Panama.

San Pablo Bay.—An extension of San Francisco Bay. It is twelve miles long and contains Mare Island.

San Pedro Bay.—A bay on the coast of southern Cal., near Los Angeles.

San Rafael.—The capital of Marin County, Cal., on San Francisco Bay, near San Francisco. It is a favorite summer resort. Pop. (1900), 3,879.

San Salvador.—The capital of the republic of Salvador, Central America, almost completely destroyed by an earthquake in 1854, and again in 1873. Pop., about 25,000.

San Salvador, or **Quezaltepec**.—An extinct

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- volcano in the republic of Salvador, 8,000 feet high.
- Sans Gêne, Madame.**—A nickname given to the wife of Marshal Lefebvre, duke of Dantzic. She was a woman of low origin, whose illiteracy and lack of breeding brought upon her the ridicule of the court. She followed her husband through the wars as a *vivandière*.
- Sanskrit.**—The ancient, classical, sacred language of India, in which the Hindu literature, from the earliest of the Vedas, is written, 8, 354.
- Sansovino, Andrea.**—Florentine sculptor, 9, 376.
- San Stefano, Peace of, 11, 12.**
- Santa.**—A river of Peru, flowing into the Pacific. Length, 200 miles.
- Santa Anna, Antonio Lopez de.**—(1795–1876.) A Mexican politician and general.
- Santa Barbara.**—The capital of Santa Barbara Co., Cal., noted for its mineral and hot springs; a favorite watering place.
- Santa Barbara.**—(1) Islands. A group of islands in the Pacific, off the coast of southern Cal. to which they belong. (2) A channel which separates a part of the Santa Barbara Islands from the mainland of Cal.
- Santa Catherina.**—(1) A province of southern Brazil, bordering on the Atlantic and having a large foreign population. (2) An island 30 miles long, off the coast of Santa Catherina, to which it belongs.
- Santa Claus, or Klaus, 13, 103.**
true? Is, 2, 351.
- Santa Cruz.**—(1) The capital of Santa Cruz Co., Cal., on the Bay of Monterey; a favorite health resort. Pop. (1900), 2,659. (2) A territory of the Argentine Republic comprising the southern part of Patagonia. (3) An eastern department of Bolivia, bordering on Brazil. (4) An island, 25 miles long, off the coast of Cal., one of the Santa Barbara group. (5) An island in the West Indies, belonging to Denmark.
- "Santa Maria."**—The flagship of Columbus in 1492, and the largest vessel of his fleet.
- Santaren, Siege of, 10, 285.**
- Santee.**—A river in South Carolina, flowing into the Atlantic; navigable 150 miles.
- Sante Fé.**—(1) The capital of New Mexico, founded in 1598. Pop. (1900), 5,603. (2) Capital of the Argentine Republic, South America.
- Santerro, Jean Baptiste, 9, 263.**
- Santiago, Battle of, 12, 372.**
Harbor, Battle of, 12, 372.
- Santiago de Chile.**—The capital of Chile; the most important city on the Pacific coast of South America.
- Santiago de Cuba.**—The chief seaport of the island of Cuba; exports sugar, coffee, and tobacco. Pop., about 70,000.
- Santiago del Estero.**—The capital of the province of Santiago del Estero, Argentine Republic.
- Santo Domingo, or Dominican Republic.**—A portion of the Island of Haiti situated in the West Indies. Area, 18,045 sq. miles; pop., about 600,000.
- Santo Espiritu.**—A town on the southern coast of Cuba.
- Santos.**—A seaport of Brazil; noted for its large exports of coffee. Pop., about 8,000.
- São Leopoldo (S. A.).**—A town in southern Brazil, the center of a large German district. Pop., of town and district, about 30,000.
- São Paulo.**—(1) One of the richest states of southern Brazil. (2) The capital of the state of São Paulo, Brazil. Pop., 100,000.
- Sapient Ass,** Latin fable, 3, 174.
- Sapphire,** September birthstone, 1, 196.
Superstitions concerning the, 1, 195.
- Sappho.**—A Greek lyric poetess. Flourished about 600 B. C.
- Saracens.**—Originally an Arab tribe. In the time of the Crusades the name was applied to all Mohammedans.
- Saracens.**—A name given, successively, to several Asiatic tribes and sects, but finally applied specifically to the great class of Moslems with whom the medieval Christians were at war, 10, 237.
Pottery of the, 1, 217.
- Sarah,** Abraham's wife, 3, 242.
- Saramaca.**—A river of Dutch Guiana, flowing into the Atlantic. Length, 200 miles.
- Saranac Lake, Upper.**—(1) A lake in the Adirondacks, N. Y., 8 miles in length. (2) Lower. A lake in the Adirondacks, N. Y.
- Saraswati,** Brahma and, 10, 5, 6.
- Saratoga, Battles of, 11, 132.**
- Saratoga Springs.**—(1) A village and celebrated watering place in N. Y. Pop. (1900), 12,401. (2) A lake in Saratoga County, N. Y.; 5 miles in length.
- Sarcasm to children, 2, 257.**
- Sarcey, Francisque.**—(1828–1899.) A noted French dramatic critic and novelist.
- Sardines,** American, 4, 293.
- Sardinia.**—An island in the Mediterranean belonging to Italy. Area, 9,294 sq. miles; pop., about 750,000.
aids in the Crimean war, 11, 3.
- Sardis, 10, 194.**
- Sardonix, 1, 197.**

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- Sardou, Victorien.**—(1831-) Celebrated French dramatist, 1, 243.
- Sargasso Sea,** 5, 103.
- Sargent, Dudley A.,** 14, 45.
- Sargent, Henry.**—(1770-1845.) An American painter.
- Sargent, John Singer.**—Born, 1856. A noted American portrait-painter, now residing in London.
- Sargon,** 10, 182, 184.
- Sarnia.**—A seaport of Ontario, Canada; also important as a railroad terminus. Pop. (1901), 8,176.
- Sarpedon,** 10, 87.
- Sarsaparilla,** 5, 75.
- Sartain, John.**—(1808-1897.) An Anglo-American artist and engraver.
- Sartain, William.**—(1843-) American landscape and *genre* painter.
- Sarto, Andrea del,** 9, 227.
- Saskatchewan.**—(1) A large river in British North America; rises in the Rocky Mountains and flows into Hudson Bay. Length, 1,500 miles. (2) A district in the southwestern part of Canada. Pop. (1901), 25,679.
- Sassafras.**—A genus of trees or shrubs of the natural order *Lauraceæ*. The wood is coarse of fiber and light, has a strong odor and a somewhat bitter taste.
- Sassoferrato,** 9, 253.
- Satellites,** 5, 110.
- Satilla.**—River in southwestern Georgia, flowing into the Atlantic.
- Satinwood,** a decorative wood, 1, 37.
- Saturday half-holiday,** 13, 100.
- Saturn,** Rings of the planet, 5, 131.
- Satya Yuga,** 10, 12.
- Saugerties, N. Y.**—A village on the west bank of the Hudson River, near N. Y.
- Sauk Center.**—A town in Stearns Co., Minn.
- Sauk City.**—A lumber center in Sauk Co., Wis.
- Sauk Rapids.**—A granite center in Benton Co., Minn.
- Sauk River.**—A river in Minnesota joining the Mississippi near St. Cloud.
- Saul,** 3, 283; 10, 183.
- Saulsbury, Eli.**—(1817-1893.) A noted American politician.
- Sault Sainte Marie.**—(1) Capital of Chippewa Co., Mich. Pop. (1900), 10,538. (2) Small town in Ontario, opposite Sault Sainte Marie, Mich.
- Sault Sainte Marie Falls.**—The rapids of St. Mary's River, the outlet of Lake Superior into Lake Huron.
- Saunders, Richard.**—The pen name under which Benjamin Franklin published his "Poor Richard's Almanac."
- Savage, Minot J.,** on education, 8, 193.
- Savage, Richard.**—(1698-1743.) An English poet.
- Savage Station (Va.), Battle of.**—One of the Seven Days' Battles of the Peninsula campaign against Richmond, 1862.
- Savaii, or Sawaii.**—The largest of the Samoan Islands, Pacific Ocean.
- Savanilla, or Sabanilla.**—An important port of the republic of Colombia, on the Caribbean Sea.
- Savannah.**—Seaport and capital of Chatham Co., Ga. One of the chief cities of the state; has large cotton shipping business. Pop., 54,244.
- Savannah River.**—Rises in the Alleghenies and flows southeast into the Atlantic. Length, 300 miles.
- Savannah (Ga.), Siege of,** 11, 132.
- Savery's steampump,** 5, 276.
- Savey, William,** 14, 146.
- Savin,** 4, 477.
- Savings Banks,** 7, 485.
Accounts, 7, 487.
laws, 7, 486.
Postal, 13, 37.
- Savonarola, Girolamo,** 10, 473; 14, 19.
- Savoy.**—In France the departments of Savoie and Haute-Savoie, formerly a duchy.
- Saw, Tenon-saw,** 7, 145.
Filing the, 7, 200.
- Sawfish,** 4, 278.
Ferocity of the, 4, 278.
- Saw-whet Owl,** 4, 144.
- Saxe, John,** 1, 248.
- Saxe, Marshall.**—(1696-1750.) French soldier and author.
- Saxe, Winifred,** 1, 248.
- Saxifrage, Early,** 5, 46.
- Saxon Heptarchy,** 10, 237.
- Saxons.**—(1) The inhabitants of northern Germany who conquered England in the fifth and sixth centuries. Also their descendants. (2) The inhabitants of Saxony in modern Germany, 8, 357.
- Saxony, Kingdom of.**—A kingdom of Germany, capital, Dresden. It is rich in mineral products and noted for its agricultural and manufacturing interests, especially for the manufacture of cotton, woolen, and china goods. Area, about 6,000 square miles. Pop., over 4,000,000.
- Saybrook founded,** 11, 46.
- Sayre, Lewis Albert.**—(1820-1900.) An eminent American surgeon; inventor of many valuable surgical instruments and appliances; originator of the plaster of Paris jacket for spinal diseases.

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- Scalawags**, 12, 156.
- Scale**, musical, 9, 184.
 Arabic, 9, 184.
 Byzantine, 9, 185.
 Chinese, 9, 184.
 Hungarian, 9, 184.
 Turkish, 9, 185.
- Scale for drawing**, 7, 267.
- Scaling a drawing**, 7, 290.
- Scallop**, 4, 373.
 shells, 4, 373.
- Scandinavia**.—That portion of Europe occupied by the Scandinavian people. Norway, Sweden and Denmark.
- Scaphoid bone**, 1, 274.
 of the wrist, 1, 274.
- Scapulae**, or shoulder-blades, 1, 273.
- Scarborough**.—(1) In England, a borough and health resort of Yorkshire. (2) The capital of Tobago, an island of the British West Indies.
- Scarlatti, Alessandro**.—(1659-1725.) A celebrated Italian composer; the founder of modern opera.
- Scarlatti, Domenico**.—(1683-1757.) A noted Italian musician and composer; son of Alessandro Scarlatti.
- Scarlet fever**, Treatment of, 1, 348.
 After effects of, 2, 373.
- Scarlet ibis**, 4, 230.
- "Scarlet Letter,"** 8, 265.
- Scarlet Macaw**, 4, 210.
- Scarlet tanager**, 4, 189.
- Scarron, Madame**, 10, 410.
- Scarron, the poet**, 10, 411.
- Schadow, Johann Gottfried**.—(1764-1850.) An eminent German sculptor, 9, 403.
- Scharwenka, Xaver**.—Born, 1850. A distinguished German pianist composer.
- Scheffer, Ary**.—Artist, 9, 266.
- Schenectady**.—A city of New York, engaged largely in the manufacture of locomotives and farming implements. Pop. (1900), 31,682.
- Schepp, Leopold**, 13, 75.
- Schiefflin, Edward**, 13, 448.
- Schievelbein, Friederich Hermann**, 9, 404.
- Schiller**.—(1759-1805.) A celebrated German poet, dramatist, and historian, 13, 263; 14, 7.
- Schilling, Johannes**, 9, 404.
- Schlegel, August Wilhelm von**.—(1767-1845.) Celebrated German poet and critic.
- Schlegel, Karl Wilhelm Friedrich von**.—(1772-1829.) A noted German poet, author, and critic.
- Schleswig-Holstein**.—A province of Prussia. Capital, Schleswig. Chief industry, cattle raising. Pop., about 2,000,000.
- Schley, Winfield Scott**.—Naval commander; sketch of, 12, 368.
 on the navy, 13, 430.
- Schliemann, Heinrich**.—(1822-1890.) A noted German archaeologist.
- Schlüter, Andreas**.—German sculptor and architect, 9, 394.
- Schofield, John McAllister**, 12, 113.
- Schoodic Lake**.—A lake 25 miles long, on the border of Maine and New Brunswick; it has its outlet in the St. Croix River.
- School** and home to be brought together, 2, 449.
 and kindergarten in eliminating evil, 2, 376.
 Critical years of, 2, 103.
 Dr. John Dewey on the, 2, 449.
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 Fatigue of the, 2, 102.
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 to be as home-like as possible, 2, 447.
- School-teaching** an occupation for women, 7, 363.
- School-training** and home-training compared, 2, 450.
- School for Scandal, The**.—A comedy by Sheridan, produced at the Drury Lane Theater in 1777.
- Schopenhauer, Arthur**.—(1788-1860.) A celebrated German philosopher, and exponent of pessimism.
- Schouvalof, Ivan**, 10, 433.
- Schrader, Julius**.—(1815-1900.) A noted German historical painter.
- Schreiner, Olive** (MRS. CRONWRIGHT).—Born, 1863. A noted author, resident in South Africa.
- Schreyer, Adolf**.—(1828-1899.) A distinguished German animal-painter.
- Schubert, Franz Peter**, 9, 131; 14, 170.
- Schumann, Madame** (CLARA JOSEPHINE WIECK).—(1819-1896.) A noted German pianist, wife of Robert Schumann.
- Schumann, Robert**, 9, 134.
- Schurman, Jacob Gould**, 8, 40, 202; 13, 67.
- Schurz, Carl**, 12, 372.
- Schuyler, Eugene**.—(1840-1890.) An American diplomatist and author.
- Schuyler, Peter**, 11, 64.
- Schuyler, Philip**.—(1733-1804.) An American patriot and soldier.
- Schuylkill**.—A river in Pa., which rises in the central part of the state, and flows into the

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- Delaware at Philadelphia. Length, about 120 miles.
- Schwab, Charles M.**, 8, 120; 13, 68.
- Schwanthaler, Ludwig**, 9, 404.
- Schwatka, Frederick**.—(1849-1892.) A noted explorer and writer.
- Sciatic nerve**, 1, 285.
- Scilla**, or **Scylla**.—A seaport of Italy, on the Strait of Messina.
- Scilly Isles**.—A group of small islands off the southwestern coast of England.
- Scio**.—In the Ægean Sea, an island belonging to Turkey.
- Scioto**.—A river of Ohio, flowing into the Ohio. Length, 250 miles.
- Scipio Africanus**, 10, 217.
- Scipio Africanus Minor**, 10, 217.
- Scissors-tail flycatcher**, 4, 199.
- Scituate**.—A coast town in Mass., 20 miles from Boston. Pop. (1900), 2,470.
- Scopas**, 9, 361.
- Score**, 13, 151.
- Scorpio**, 5, 143.
- Scorpion, The**, 4, 324.
- Scotch cattle**, 4, 16.
 dog, 4, 18.
 dumpies, fowl, 4, 107.
 fairy tales, 3, 125.
 terrier, 4, 21.
- Scotland**.—A country of Europe; the northern part of the island of Great Britain. Capital, Edinburgh, largest city, Glasgow. The country is divided into the Highlands and the Lowlands, the former comprising the northern and western region, the latter the southern and eastern. The Grampians are the most important mountains; there are many lakes and the country is famous for the beauty of its scenery. It is also rich in historical interest. It has great manufacturing industries, and extensive coal and iron mining interests. Area, 29,785 sq. miles; pop., about 5,000,000.
 Independence of, 10, 265.
 National flower of, 1, 200.
 Struggle with England, 10, 263.
- Scotland Yard**.—A street in London, noted formerly as the site of the police headquarters.
- Scott, Hugh S.** (*pseudonym* HENRY SETON MERRIMAN).—A British novelist.
- Scott, Sir George Gilbert**.—(1811-1878.) A distinguished English architect.
- Scott, Sir Walter**.—(1771-1832.) Scotland's greatest novelist, 1, 146; 14, 10, 101.
- Scott, Winfield**.—(1786-1866.) A distinguished American general, 12, 372.
- Scranton**.—A city of Pennsylvania; a railroad and coal-mining center; it has very extensive manufacturing industries, especially noted for its iron and steel works. Pop. (1900), 102,026.
- Scrap-book**, Play with, 2, 147, 420.
- Screech Owl**, 4, 144.
- Screw**, Lifting Power of, 5, 263.
- Screws**, 7, 210.
- Scriblerus Club**.—An association of literary men, founded in London in 1714, by Dean Swift.
- Scribner, Charles**.—(1821-1871.) An American publisher.
- Scrip**, 13, 191.
- Scudder, Horace Elisha**.—Born at Boston, 1838. A noted American author.
- Scugog Lake**.—A lake in Ontario, Canada; 10 miles in length.
- Sculling**, 6, 337.
- Sculpture**, 9, 340.
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 - Ghiberti, 9, 369.
 - Lombardo, 9, 376.
 - Michelangelo, 9, 377.
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 - Pollajuolo, 9, 375.
 - Renaissance, Early, 9, 367.
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 - Sansavino, 9, 376.
- Netherlands, 9, 395.
- Persian, 9, 346.
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Scutellaria integrifolia, 5, 25.
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Scylla, the rock, 3, 381.

Sea anemone, 4, 380.

Sea Birds, How They Quench Their Thirst.—

Sea birds are believed to satiate their thirst partly from the falling rains and partly from the fat and oil which they devour ravenously when opportunity puts them in their way. The keen eyesight of birds is well known, and sea birds have been observed flocking toward the storm cloud, about to burst, from all points of the compass, and apparently drinking in the water as it descends from the skies. They scent a rain squall, says an old skipper, a hundred miles or even farther off, and scud for it with almost incredible swiftness. Sea birds obtain fat and oil from the fish which they catch, and on which they subsist, and they have also been known to follow ships for considerable distances, picking up scraps of fat which may be thrown overboard. These birds are believed to be able to remain for several days, and even weeks, without being compelled to seek for water; though at the same time, their marvelous speed of flight would soon enable them to cover, when necessary, the distance between them and fresh water on the nearest land.

Seabright bantam fowl, 4, 107.

Sea-cucumber, 4, 309.

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Sea-devil, 4, 277.

Habits of, 4, 278.

Sea duck, 4, 110.

Sea-flowers, 4, 380.

Sea Horse, 4, 282.

Australian, 4, 283.

Habits of the, 4, 283.

Seal of the United States, 11, 132.

Seal, W. P., on destruction of mosquitoes, 4, 356.

Seal River:—A river of British America flowing into Hudson's Bay. Length, 200 miles.

Sea mouse, 4, 327.

Sea nettle, 4, 379.

Sea Owl, 4, 284.

Sea parrot, 4, 221.

Sea-shell, Largest Ever Found.—Seven feet in length and over 15 ft. in circumference, is the size of the shell of one of the largest thalassians (sea tortoises or turtles) of the genus *Sphargis*, and its weight was close upon 1,900 lb. These giant turtles are found all along the Atlantic coast. A shell of the giant oyster imported from India measured 3½ ft. by 4 ft., and weighed nearly 500 lb. The giant clam is even larger still, some being found measuring a yard and a half in length, and weighing 500 lb. Magnificent examples of these shells may be seen in the Church of St. Sulpice, Paris, where they hold the holy water. They were the gift of the Venetian Republic to Francis I. When the Island of Mauritius, off the east coast of Africa, was ceded to Great Britain by France in 1810, there was a gigantic turtle in a court of the artillery barracks at Louis, which is still there, although almost blind. It weighs 330 lb. and stands 2 ft. high when walking. Its shell is 8 ft. 6 in. long, and it can carry two men on its back with ease. It is believed to be at least 200 years old. One of the most valuable shells in the world is the "Chauk Shell." Those having the peculiarity of an opening on the right, and not on the left, are much prized by the women of the East Indies, and are sold for sums varying from \$250 to \$500. The rarest shell known is "The Cone of the Holy Mary." Only two specimens are known to be in existence. One is in the British Museum, and is valued at \$5,000.

Seas, High, 12, 302.

Seasons, Cause of the changes of, 5, 113.

Sea-soundings, Deepest Ever Made.—Forty-six thousand two hundred and thirty-six feet, or just 36 ft. over eight and three-quarter miles, the bottom having been reached at this immense depth in the South Atlantic Ocean, at a point midway between the Island of Tristan d'Acunha and the mouth of the Rio de la

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- Plata.** This is more than half as much again in depth as the highest mountain in the world. In the North Atlantic Ocean, south of Newfoundland, soundings have been made to a depth of 27,480 ft., while depths of 34,000 ft. are reported south of the Bermuda Islands. The deepest soundings in the Mediterranean yet made gave a depth of 14,136 ft., at a point between Malta and Crete. The average depth of the Pacific Ocean, between Japan and California, is a little over 12,000 ft.; between Chile and the Sandwich Islands, 15,000 ft.; and between Chile and New Zealand, 9,000 ft.
- Sea swallow, 4, 218.**
- Seats in school, 2, 414.**
- Seattle.**—One of the chief cities of Washington; situated on Puget Sound. It has an extensive lumber and coal trade. Pop. (1900), 80,671.
- Sea urchin, 4, 309.**
Sand-dollar, 4, 309.
- Sea weeds, 5, 99.**
Carrageen, 5, 103.
Dulse, 5, 102.
Gulf-weed, 5, 103.
Sargasso, 5, 103.
Sea lettuce, 5, 100.
To collect, 5, 99.
- Sebago Lake.**—A lake in Maine; 12 miles long.
- Sebastian, Saint.**—Executed, 288 A.D. A Roman soldier and Christian martyr.
- Sebastopol, or Sevastopol.**—In Russia, a seaport of Taurida; an important naval station. The siege of Sebastopol was the greatest event of the Crimean War.
- Sebat, 13, 102.**
- Secale cereale, 5, 88.**
cornutum, 5, 88.
- Secretaries, Women as private, 7, 357.**
- Secretary-bird, 4, 228.**
- Section, of a township, 13, 148.**
- Securities, 13, 191.**
Dealing in, 13, 191.
- Sedalia.**—An important railroad center, and manufacturing town of Mo. Pop. (1900), 15,231.
- Sedan.**—(1) A former principality of France.
(2) A city of France in the department of Ardennes. It has an extensive cloth manufacturing industry, 11, 9.
- Sedgemoor.**—In Somerset, England; the scene of the defeat of the Duke of Monmouth by the Royalists under Feversham, 1685, 10, 326.
- Sedgwick, Catherine Maria.**—(1789-1867.) An American novelist and miscellaneous writer.
- Sedgwick, Theodore S.**—(1747-1813.) An American statesman and jurist.
- Sedimentary rocks, 5, 432.**
- Seeing and Seizing Opportunities, 14, 43.**
- Seguin, Mrs. Anne Childe.**—(1814-1888.) A famous English opera singer.
- Seguin, Arthur Edward Sheldon.**—(1809-1852.) A popular English bass singer.
- Seidl, Anton.**—(1850-1898.) A noted Hungarian musician and musical conductor, especially distinguished as an exponent of Wagner's music.
- Selenite, 5, 445.**
- Seleucus, 10, 206.**
- Self-confidence taught by physical training, 6, 18.**
- Self-control, Teaching, 2, 78.**
Time to begin to teach, 2, 457.
- Self-education, 8, 87.**
- Self-heal, 5, 26.**
- Selfishness, 2, 294.**
Caring for pets a cure for, 2, 297.
- Self, Mastery of, 14, 261.**
- Self-preservation and first aid to the injured, 1, 352.**
Instinct of, 2, 1.
- Self-reliance, Habit of, 2, 462.**
Rock of, 14, 174.
Teaching a child, 2, 123.
- Self-will, 2, 295.**
- Seligman, Joseph.**—(1819-1880.) A New York banker and financier.
- Seljukian Turks, 10, 287.**
- Selkirk, Alexander.**—(1676-1723.) A Scottish sailor who led a life of adventure; said to be the original of "Robinson Crusoe."
- Selkirks, The.**—A group of lofty mountains in the Rocky Mountain system of Canada.
- Sellasia, Battle of, 10, 207.**
- Selling goods, 13, 380.**
at retail, 13, 385.
for cash, 13, 386.
on credit, 13, 386.
- Selma.**—A town of Alabama; a railroad and manufacturing center. Pop. (1900), 8,713.
- Semele, 10, 101.**
- Semilunar bone, 1, 274.**
valves of the heart, 1, 282.
- Seminole wars, 11, 396.**
- Semiramis of Assyria, 10, 392.**
- Semi-palmated sandpiper, 4, 133.**
- Semites.**—A name given to the Hebrews and allied races in southwestern Asia and eastern Africa—the supposed descendants of Shem the son of Noah.
- Semitic languages, 8, 354.**
- Semmes, Raphael, 12, 114.**
- Sempach, Battle of, 10, 276.**
- Senate, 12, 372.**
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- Senator, Requirements of**, 12, 373.
- Seneca**, 14, 7.
- Seneca Falls**.—A village of New York; engaged largely in manufacturing. Pop. (1900), 6,519.
- Seney, George I.**—(1826-1893.) A noted American financier and philanthropist.
- Senlac, Battle of**, 10, 251.
- Senna**, 5, 7.
- Sennacherib**, 10, 182, 184.
- Sense, Esthetic**, 9, 187.
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- Sensibilities, Quick**, 2, 285.
- Sensitive children**, 2, 98, 193.
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- Sensory nerves**, 1, 284.
- Sentinum, Battle of**, 19, 213.
- Sepoy Mutiny**, 11, 16.
- Septum of the nose**, 1, 294.
- Sequoia gigantea**, 4, 466.
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- "Serapis,"** 11, 109.
- Serena**, 10, 401.
- Serfs of Russia, Emancipation of**, 10, 389.
- Serpentine**, 5, 448.
- Serpents**, 4, 243, 245.
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Fangs of, 4, 245.
Food of, 4, 245.
Habits of, 4, 246.
Non-poisonous, 4, 246.
Skin-shedding, 4, 245.
- Serpent, Seven-headed**, Grecian fairy tale, 3, 51.
- Serpula**, 4, 378.
- Serratus magnus muscle**, 1, 275.
- Servant question**, 1, 130.
- Servants, Room for**, 1, 133.
Treatment of, 1, 133.
- Servia**.—A constitutional hereditary monarchy of the Balkan Peninsula in southeastern Europe; agriculture is the chief industry. Area, 19,050 sq. miles; pop., about 2,400,000.
Kingdom created, 11, 12.
Revolt of, 11, 11.
- Servian fairy tales**, 3, 48.
- Sesostris**, 10, 179.
- Seti I., or Sethos**.—About 1366 B. C.; King of Egypt, father of Rameses II.
- Seti II.**—A king of Egypt; Son of Menepthah.
- Set-off**.—A counterclaim or cross debt arising from a matter different from the one in question.
- Sette Lagoas**.—Seven lakes in Brazil, said to be the source of the Paraguay River.
- Setter dog**, 4, 20.
English, 4, 20.
Gordon, 4, 20.
- Setter dog — Continued.**
Irish, 4, 20.
Laverack, 4, 20.
Llewellyn, 4, 20.
- Seven Days' Battles (Va.)**.—Name given to a series of engagements between the armies of Gen. Lee and Gen. McClellan during the retreat of the latter from Richmond down the Peninsula. The battles took place on consecutive days from June 26 to July 1, 1862.
- Seven Hills of Rome, The**.—The hills upon which Rome was originally built; they are the Palatine, Capitaline, Quirinal, Aventine, Cæline, Esquiline, and the Viminal. The highest of these elevations is the Quirinal, 226 feet above the sea level. They were inclosed by the Servian wall.
- Seven Pines and Fair Oaks (Va.), Battle of**.—An important battle in the early part of McClellan's Peninsula campaign against Richmond, May-June, 1862. The Confederates were repulsed; the losses being above 5,000 on each side.
- Seven Years' War**, 10, 336, 338, 341.
- Severn**.—A river of Canada flowing into Hudson Bay.
- Severn tunnel**, 5, 421.
- Severus**, 10, 231.
- Sevier**.—(1) A salt lake in Utah, 20 miles long and 10 miles wide. (2) A river in western Utah which flows into Lake Sevier. Length, 200 miles. (3) A desert in western Utah.
- Sevier, John**.—(1745-1815.) An American pioneer and general, famous as an Indian fighter.
- Sevigné, Marie, de Rabutin-Chantal, Marquise de**.—(1626-1696.) Celebrated for her letters to her daughter, which constitute one of the finest contributions to French literature.
- Seville, or Sevilla**.—In Spain; the capital of the province of Seville; a great commercial center; one of the most important cities in the country. Pop., about 200,000.
- Sewall, Arthur**, 12, 373.
- Seward, William Henry**, 12, 119.
- Sewing**, 7, 57, 418.
an amusement, 2, 133; 7, 29.
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- Sewing Machine**, 5, 282.
- Sex, Enlightening children on questions of**, 2, 427.
- Seymour, Horatio**, 12, 157.
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- Shaban**, 13, 103.
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Shadrach, 10, 184.

Shafter, William R., died in November, 1906, 12, 373.

Shaftesbury, Earl of, 8, 15.

Shagbark, 4, 449.

Shagreen leather, 4, 15.

Shakers, 11, 112.

Shakespeare, William. — (1564-1616.) A celebrated English poet and the greatest of dramatists.

He was born at Stratford-upon-Avon on, it is supposed, St. George's Day, April 23, and, by a strange coincidence, this was also the day of his death. Little is known of his family history, except such few facts as the town records furnish, and these show that his father was a man in poor circumstances. William attended the Grammar School at Stratford, where he learned "little Latin and less Greek." He went to London and attached himself in a menial capacity to the Globe Theater. Later, he became a writer and adapter of plays. Then followed his own plays in rapid succession. He drew his plots and incidents from all available sources; the romances of Europe, Plutarch's lives, and European history furnished him with material. The only parts he is known to have taken in his own works are those of Adam in "As You Like It" and the Ghost in "Hamlet." Of his works, which comprise comedy, tragedy, and history, probably the best in each of these departments respectively is "Midsummer Night's Dream," "Hamlet" and "Julius Cæsar." Shakespeare was a many-sided man. He was not only a lawyer, theologian, philosopher, sailor, soldier, and statesman, but he was great in all these capacities. It is said by the most eminent nautical authorities that were a ship in such a predicament as he represents the one in the first scene of the "Tempest," no other orders from the captain than those which he causes him to give could possibly extricate her. Of recent years a controversy has arisen among scholars as to whether Shakespeare or Lord Bacon wrote the plays generally accredited to Shakespeare. The strength of the Baconian ground appears to be our ignorance of Shakespeare's life.

Shaler, Nathaniel Southgate. — (1841-1906.)

An eminent geologist and paleontologist. Professor at Harvard University and book critic.

Shallop.—A large open boat, carrying two masts rigged as a schooner, principally used in fisheries.

Shalmaneser, 10, 181.

Shalott, Castle of, 3, 440.

Shamokin.—A borough in Northumberland Co., Pa., an important center of a coal mining region. Pop. (1900), 18,202.

"Shamrock."—A racing yacht, owned by Sir Thomas Lipton, of England. The unsuccessful contestant for the America's cup in 1899. A new boat "Shamrock II.," built by Lipton to contest for the prize in 1901 was also unsuccessful.

National flower of Ireland, 1, 200.

Shang dynasty, 10, 148.

Shanghai.—A city and one of the chief seaports of China; situated in the province of Kiangsu; chief exports silk and tea. There is an important foreign residency in Shanghai — Americans, British, etc. Pop., estimated about 400,000.

a free port, 10, 161.

Shang Ko-he, 10, 159.

Shang Ti, 10, 34.

Shank, 10, 10.

"Shannon," 11, 258.

Shark, 4, 278.

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Hammer-headed, 4, 279.

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Shagreen, 4, 280.

Skin of the, 4, 280.

Teeth, 4, 279.

Thresher, 4, 279.

Tiger, 4, 280.

White, 4, 279.

Young, 4, 280.

Zebra, 4, 280.

Sharon.—A borough in Mercer Co., Pa.: a railroad and manufacturing center. Pop. (1900), 8,916.

Sharon Springs, N. Y.—A small town and summer resort of New York.

Sharon, William.—(1830-1885.) An American capitalist and politician.

Sharp, Becky.—One of the important characters in Thackeray's "Vanity Fair."

Sharps, Christian.—(1811-1874.) An American inventor; originator of the Sharps' rifle.

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- Sharpsburg (Md.), Battle of.**— See **ANTIETAM, BATTLE OF.**
- Sharpshinned Hawk**, 4, 140.
- Sharp-tailed grouse**, 4, 123.
Swallow, 4, 184.
- Shasta Mount.**— A mountain peak of the Sierra Nevada range in Cal., 14,440 feet high; one of the highest peaks of the U. S.
- Shattuck, Aaron Draper.**— Born at Frances-town, N. H., 1832. A noted American landscape-painter.
- Shaw, Henry Wheeler.**— (1818-1885.) An American writer of humor, under the pseudonym of "Josh Billings" and "Uncle Esek."
- Shaw, Leslie M.**, 12, 373.
- Shawls, Cashmere**, 4, 27.
- Shays, Daniel**, 11, 132.
- Shays's Rebellion**, 11, 132.
- Sheboygan.**— An important city and port of Wisconsin; has extensive commerce in lumber, coal, and wheat. Pop. (1900), 22,962.
- Sheep**, Breeds of, 4, 24.
dog, 4, 18.
History of the, 4, 24.
Horns of, 4, 23.
Merino, 4, 24.
Rocky Mountain, 4, 24, 31.
Shearing, 4, 24.
Teeth, 4, 23.
- Sheep-laurel**, 5, 12.
- Sheepshead Bay.**— An inlet of the Atlantic on the coast of Long Island, N. Y.
- Sheet, To iron a**, 1, 30.
- Sheffey, Daniel**, 14, 95.
- Sheffield.**— (1) In England, a parliamentary and municipal borough in the West Riding of Yorkshire. The principal seat of England's cutlery industry. Pop., about 500,000. (2) A town of Alabama; an iron-mining and manufacturing center. Pop. (1900), 3,333.
- Shelby, Isaac**, 11, 258.
- Shelbyville.**— (1) A flourishing town of Ill. Pop. (1900), 3,546. (2) The county seat of Shelby Co., Ind. Pop. (1900), 7,169. (3) A town of Ky.; the seat of several educational institutions. Pop. (1900), 3,016.
- Shellbark, The.**— See **HICKORY**, 4, 449.
- Shellfish, The.**— See **MOLLUSK**, 4, 369.
- Shelter Island (N. Y.).**— An island in Suffolk Co., in Gardiner's Bay at the eastern extremity of L. I. It contains a village, settled by emigrants from Conn., in 1652; it has a camp-meeting ground and is a popular summer resort, with a resident population (1900), of 1,066.
- Shem, Story of**, 3, 231.
- Shenandoah.**— A borough of Schuylkill Co., Pa., in the anthracite coal-mining region. Pop. (1900), 20,321.
- Shenandoah.**— A river in Va., the largest tributary of the Potomac. Length, 175 miles.
- Shenandoah, Army of the.**— A name given the force under General Philip H. Sheridan which opposed General Early's Confederate army in the Shenandoah Valley in the fall of 1864.
- Shenandoah Mountains.**— A part of the range which forms the western boundary of the Shenandoah Valley.
- "Shenandoah," The.**— A Confederate cruiser fitted out at an English port to prey upon the ocean commerce of the north during the Civil War.
- Shenandoah Valley.**— See **JACKSON, THOMAS JONATHAN.**
- Shepherd and Nightingale**, German fable, 3, 194.
kings of Egypt, 10, 179.
- Shepherd's clock**, 5, 36.
- Sheppard, Jack.**— (1702-1724.) A famous English robber and popular hero.
- Sheridan, Mount.**— A peak of the Red Mountains in Yellowstone National Park. Height, about 10,000 ft.
- Sheridan, Philip Henry.**— Soldier; sketch of, 12, 126.
- Sheridan's Ride.**— When the Confederates under Early fell under Sheridan's army Oct. 19, 1864, Sheridan was at Winchester. Learning of the attack, he leaped into his saddle and galloped to the scene of conflict. His prompt action with the inspiration of his presence turned disaster into victory.
- Sheridan, Richard Brinsley**, 14, 11, 227.
- Sherman, John**, 12, 333; 14, 255.
- Sherman Act of 1890**, 13, 157.
Anti-trust law, 12, 180.
Roger, 14, 95.
William Tecumseh, 12, 132.
- Sherman's March to the Sea**, 12, 75.
- Sheth, Story of**, 3, 227.
- Shetland Islands.**— A group of islands lying north of Scotland, to which they belong; they form the county of Shetland.
pony, 4, 13.
- Sheval**, 13, 103.
- Shi Hoang-Ti**, 10, 150.
- Shi King**, Hymns of the, 10, 35.
- Shillaber, Benjamin Penhallow.**— (1814-1890.) An American journalist and humorist, best known as the author of the "Sayings of Mrs. Partington."
- Shilling**, New England, 13, 164.
- Shiloh.**— A place in Harding Co., Tennessee, famous as the scene of one of the principal

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- battles of the Civil War. (See **SHILOH, BATTLE OF**.)
- Shiloh** (Tenn.), **Battle of** (also called **PITTSBURG LANDING**).—One of the greatest battles of the Civil War, fought Apr. 6 and 7, 1862. The Federal troops under Grant, later reënforced by Buell, was attacked by the Confederates under A. S. Johnston. After nearly two days of exceptionally hard fighting the Confederates retreated and were not pursued. The total Federal loss was nearly 14,000. The Confederate loss, which included Gen. Johnston killed, was reported at 10,699.
- Shin-che**, 10, 159.
- Shiner**, 4, 302.
- Shingles, Treatment of**, 1, 345.
- Shingles, and Shingling, To measure**, 13, 147.
- Shin-leaf**, 5, 15.
- Shinnecock Bay**.—An inlet of the Atlantic on the southern side of Long Island.
- Shinny**, 6, 277.
- Shinplasters**, 13, 165.
- Ship of the Desert**, 4, 89.
- Shippegan, or Shippagan Island**.—An island off the northeasterly coast of New Brunswick, to which it belongs.
- Ship's time-bells and watches**, 13, 104.
- Ship worm**, 4, 374.
- Shishak**, 10, 180.
- Shoes, Making of**, 13, 394.
- Shoe Trade**, 13, 393.
- Shonts, Theodore P.**, 12, 179.
- Shonts, Mrs. Theodore P.**, 1, 259.
- Shop clerks, Women as**, 7, 413.
- Shopping, Professional**, 7, 429.
- Shore finch**, 4, 184.
- Shore lark**, 4, 173.
- Short-billed marsh wren**, 4, 166.
- Short-eared owl**, 4, 144.
- Short-horned cattle**, 4, 16.
- Shoshone Falls**.—A beautiful cataract of the Snake River, Idaho. Height, 210 feet.
- Shoshone River**.—Snake River, Idaho.
- Shot, Educational value of putting the**, 6, 18.
- Shoulders, Exercises for the**, 6, 21.
- Shrady, Dr. George F.**, 8, 103; 14, 46.
- Shreve, Henry M.**—(1785-1854.) An American pioneer and inventor; he constructed in 1817 the first "stern wheel" steamboat.
- Shreveport**.—An important city of La., the terminus of the Texas and Pacific Railroad. It has extensive shipping interests, especially in cotton and hides. Pop. (1900), 16,013.
- Shrew mole**, 4, 47.
- Shrewsbury**.—A river of N. J., a continuation of Sandy Hook Bay.
- Shrike, The**.—See **BUTCHER-BIRD**, 4, 146.
- Shrimp, The**.—See **CRUSTACEAN**, 4, 367.
- Shrinkage**.—Reduction in bulk or measurement.
- Shropshire**.—A county of England; capital Shrewsbury. Chief industry, agriculture.
- Shrove Tuesday**, 13, 101.
- Shumiro Accadians**, 10, 48.
- Shun-te**, 10, 157.
- Shuter, the comedian**, 14, 194.
- Shylock**.—A Jew, one of the leading characters, in Shakespeare's "Merchant of Venice."
- Shyness, a bar to conversation**, 1, 81.
Cure for, 14, 116.
- Siam**.—A kingdom in the peninsula of Indo-China, Asia. Capital, Bangkok; principal industry, the cultivation of rice. Pop., about 5,000,000.
- Siberia**.—A great region forming part of the Russian empire; chief towns, Tomsk and Irkutsk; principal industry, agriculture. The country has much mineral wealth. Area, 4,833,496 sq. miles; pop., about 6,000,000, 11, 25.
Expansion of Russia in, 11, 25.
Forts erected by Peter the Great, 11, 26.
Lord of, 11, 25.
Tobolsk fortified, 11, 25.
- Siberian dog**, 4, 18.
- Sicard, Abbé**, 14, 150.
- Sicily**.—An island in the Mediterranean Sea, south of Italy, belonging to the Italian kingdom. Its chief city is Palermo. Area, 9,936 sq. miles; pop., 3,400,000.
conquered by Belisarius, 10, 236.
- Sickle-bill humming bird**, 4, 202.
- Sickles, Daniel Edgar**, 12, 373.
- Sick room**, 1, 300.
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- Siddhartha, Prince**, 10, 44.
- Side-board**, 1, 17.
Colonial, 1, 17.
- Side-saddle flower**, 5, 20.
- Sidney, Sir Philip**, 2, 474.
- Sidon**, 10, 185.
- Siena, or Sienna**.—In Italy, capital of the province of Siena; famous for its works of art.
- Sierra Madre**.—A mountain range of Mexico.
- Sierra Nevada**.—Mountain ranges of California, lying along the Pacific coast. These mountains are famous for their scenery, for the Yosemite Valley, etc. Highest summit, Mount Whitney, about 15,000 feet.
- Sight, Defects of**, 2, 99.
Tests for, 2, 100.
- Sight draft**, 13, 197.

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- Sigmoid flexure**, 1, 279.
- Signorelli**, 9, 223.
- Signature** by initials only, 13, 127.
in duplicate, 13, 246.
Witnesses to a, 13, 123.
- Sigsbee, Charles Dwight**, 12, 373.
- Silent partner**, 13, 197.
- Silenus**, 10, 101.
- Silesia**.—(1) A province of Prussia. Capital, Breslau; it is rich in mineral products, and is one of the chief manufacturing provinces of Prussia. (2) A crownland and titular duchy of Austria-Hungary. Extensive mining and manufacturing industries.
- Silhouetting**, 7, 49.
- Silica**, 5, 198.
- Silicates**, 5, 199.
- Silicon**, Properties of, 5, 198.
- Silk** curtains, 1, 35.
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- Silks**, To wash summer, 1, 29.
- Silkworm**, 4, 344.
American, 4, 346.
Cocoon, 4, 346.
- Silkworm and the Spider**, Spanish fable, 3, 203.
- Sill, Edward Rowland**, Letters of, 1, 88.
- Silver**.—Since the earliest time recorded in history, silver has been the most used of the precious metals, both in the arts and as a medium of exchange. Even in the prehistoric times silver mines were worked and the metal was employed in the ornamental and useful arts. It was not so early used as money, and when it began to be adopted for this purpose, it was made into bars or rings and sold by weight. The first regular coinage of either gold or silver was in Phrygia, or Lydia, in Asia Minor. Silver was used in the arts by the Athenians, the Phœnicians, the Vikings, the Aztecs, the Peruvians, and in fact by all the civilized and semicivilized nations of antiquity. It is found in almost every part of the globe, usually in combination with other metals. The mines in South America, Mexico, and the U. S. are especially rich. In 1890, the U. S. led the world in silver production with \$70,000,000, Mexico being second with \$50,000,000. Silver is sometimes found in huge nuggets. A mass weighing 800 pounds was found in Peru, and it is claimed that one of 2,700 pounds was extracted in Mexico. The ratio of the value of silver and gold has varied greatly. At the Christian era it was 9 to 1; 500 A. D. it was 18 to 1; but in 1100 A. D. it was only 8 to 1. In 1893 it was as high as 2,577 to 1. The subject has entered largely into American politics as a disturbing element, and in 1896 the Democratic party, in its national convention, declared for the free coinage of the metals at 16 to 1. The Republican party adhered to the gold standard and declared against the free coinage of silver. Each party reaffirmed in 1900 this plank in its platform. In both years the Democrats were defeated. (See **BLAND-ALLISON ACT**; **COINAGE LAWS**; **SHERMAN Act**, all in this volume; also **BRYAN, WILLIAM JENNINGS**.)
- Silver Output of the U. S. (1900)**.—The total output of silver in the U. S. for the year 1900 is estimated at 60,478,276 troy ounces, valued at \$37,085,250. The increased product is due mainly to an increased yield of copper and lead which have been refined by processes where silver is obtained as a by-product. Besides the ore mined in the U. S. American refineries produced in 1900 from foreign ores and bullion 46 million troy ounces of silver, valued at 28 million dollars. The silver coined at the U. S. mint for the year was valued at 36 millions. Next to the U. S. comes Mexico as a silver-producing country; the yield value of that country for 1899 was 33 millions. Australasia, Canada, Bolivia, and Germany also add somewhat to the annual silver product yield.
- Silver**, Care of, 1, 115.
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To remove stains from, 1, 115.
- Silverware**, Women as designers of, 7, 403.
- Similarity**, Perception of, 2, 169.
- Simon de Montfort**, 10, 261, 263.
- Simon, Jules** (properly **JULES FRANÇOIS SIMON**

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SUISSE).—A distinguished French statesman, philosopher, and publicist.

Simonides, or Semonides, of Amorgos.—A famous Greek poet who flourished in the 6th century B. C.

Simon, the Canaanite, or Simon Zelotes.—One of the apostles.

Simple Interest.—Interest on principal alone.

Simpletons, Tales of, 2, 174.

Simpson, Bishop, 14, 6.

Sinai, Mount.—In the Sinaitic Peninsula, between the Gulf of Suez and the Gulf of Akabah. The mountain upon which Moses received the law.

Sindbad the Sailor.—A character in one of the stories of the "Arabian Nights' Entertainments."

Sink, Kitchen, 1, 23.

Sinking Fund, 13, 197.

Sirenia, 4, 11.

Sirens.—In Greek mythology, sea-nymphs who destroyed those who sailed near to their island, attracting and fascinating them by their singing.

Sirius, the dog-star, 5, 141.

Legend of, 10, 93.

Siskin, Pine, 4, 184.

Sister, Legal rights of a, 13, 308.

Sistine Chapel, 9, 230.

Madonna, 9, 236.

Sisyphus, 10, 103.

Sita of the Ramayana, 3, 330.

Sitka.—The capital of Alaska, situated on Sitka Island.

Sitting alone, Too early, 2, 80.

Correct position, 4, 414.

erect, 2, 80.

Sitting Bull, 12, 374.

Siva, 10, 17.

Sivan, 13, 102.

Six Nations.—A confederation of tribes of the Huron-Iroquois family of Indians, comprising the Mohawks, Senecas, Cayugas, Oneidas, Onondagas, and the Tuscaroras.

Sixteen to One, 12, 217.

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Flesh of the, 4, 278.

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Skating, 6, 302.

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Skeat, Walter William.—Born, 1835. A noted English philologist.

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Skin, a symptom in disease, 1, 319.

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Slave Representation, 12, 374.

Slavery Constitution, Missouri's, 11, 394.

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Question in politics, 11, 177.

Struggle, 11, 332.

Slaves, The first negro, 11, 43.

Slave trade, Abolition of, 10, 389.

African, 11, 336.

Slavonia.—A region of Austria-Hungary.

Capital, Essek. Inhabited chiefly by Slavs.

Sled, To make a, 7, 230.

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Insomnia, 6, 10.

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Decorations of the, 1, 18.

Draperies for the, 1, 18.

for children, 2, 445.

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Sleepy Hollow.—A place in Tarrytown, New York, on the Hudson River. Made famous by Washington Irving's "Legend of Sleepy Hollow."

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Slidell, John, 12, 374.

Slocum, Henry Warren, 12, 139.

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Uno Cygnæus, 7, 113.

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Smalley, George W.—Born, 1834. An American journalist and noted European correspondent.

Smart, Christopher.—(1722-1770.) An English poet.

Smeaton, 14, 216.

Smelt, 4, 294.

Smerdis, 10, 188.

Smith, Andrew Jackson, 12, 139.

Smith, Charles Emory, 12, 374.

Smith, Charles Ferguson, 12, 139.

Smith, Edmund Kirby, 12, 139.

Smith, George, 9, 281.

Smith, Goldwin.—Born, 1823. An English historian and miscellaneous writer on public affairs; resident for some years in Toronto, Can., 10, 439.

Smith, John.—(1579-1631.) An English adventurer; identified with the colonial history of Virginia.

Smith, Captain John, 11, 41.

Smith, Sydney.—(1771-1845.) An English clergyman and essayist; noted as a critic and wit; one of the founders of the "Edinburgh Review," 2, 390.

Smith, William Farrar, 12, 139.

Smithsonian Institution.—Established in Washington, 1846, by means of a fund bequeathed by James Smithson, an English chemist and mineralogist who died in 1829. Under its direction are the National Museum, Bureau of International Exchanges, Bureau of American Ethnology, the Astro-physical Observatory, and the National Zoölogical Park. The institution has published many important works on natural science.

Smokeless powder, 5, 174.

Smollett, Tobias George.—(1721-1771.) A noted British novelist and miscellaneous writer.

Smoot Case, 12, 177.

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Smyrna.—A seaport and the most important city of Asia Minor, Turkey. It exports fruit, carpets, opium, cotton, etc. Pop., over 200,000.

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Sociable, Training children to be, 2, 194.

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usages, 1, 39.

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Society Islands, or Tahiti Archipelago.—A group of south Pacific islands. Capital, Papeete. Exports, fruit, mother-of-pearl, etc. Under French protection. Area, 660 square miles.

Socrates.—(470-399 B. C.) A famous Greek philosopher.

A saying of, a French fable, 3, 189.

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Son, Father's attitude towards, 2, 394.

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Songs, Patriotic, and Their Composers.—

1. National Hymn, "God Save Our Union," words and music by P. S. Gilmore.

2. "Viva L' America, Home of the Free," composed by Harrison Millard.

3. "The Flag of Our Union," words by George P. Morris, music by W. Vincent Wallace.

4. "E Pluribus Unum," words by Capt. G. W. Cutter, music by Mrs. E. H. Pendleton.

5. "Hail Columbia," a patriotic American song written by Joseph Hopkinson, in 1798.

6. "Columbia" (founded on the History of America), words and music by P. S. Gilmore.

7. "Battle Hymn of the Republic," by Julia Ward Howe.

8. "John Brown," or "Glory, Hallelujah" (unknown).

9. "America," words by S. F. Smith, music by J. C. Macy.

10. "God of Our Fathers," words by Rev. S. Wolcott, music by H. P. Danks.

11. "The Sword of Bunker Hill," words

by William Ross Wallace, music by Bernard Covert.

12. "Yankee Doodle," words anonymous, music by J. C. Macy.

13. "Rally Round the Flag," words by James T. Fields, music by Wm. B. Bradbury.

14. "Landing of the Pilgrims," words by Mrs. Hemans, music by Miss Brown.

15. "The Land of Washington," words by G. P. Morris, music by F. H. Brown and Collin Coe.

16. "The Banner of Freedom," American National Hymn, by J. N. Pattison.

Sonnerat jungle fowl, 4, 105.

Sontag, Henriette, Countess Rossi.—(1805–1854.) A celebrated German soprano singer, 14, 378.

Sophia of Russia, 10, 430.

of Hanover, 10, 338.

Sophocles.—(495?–406 B. C.) A great Grecian tragic poet.

Sora Rail, 4, 131.

Sorghum.—A Chinese sugar cane, introduced into the U. S. about 1854. It is cultivated extensively in the Southern States and its product is syrup, 5, 233. dora, 5, 83.

Soudan, or Sudan.—A vast imperfectly defined tract of Africa lying south of the Desert of Sahara and stretching across the continent from the Atlantic Ocean to the Red Sea.

Soule, Pierre, 12, 140.

Soult, Nicolas Jean de Dieu, duc de Dalmatie.—(1769–1851.) A famous French marshal who served with distinction throughout the Napoleonic wars, and held high cabinet positions in France.

Sound, The.—A passage between Sweden and the island of Zealand. It connects the Cattegat with the Baltic Sea. It is 3 miles wide at its narrowest part. Denmark levied taxes upon all shipping passing through until 1857.

Sound, 5, 384.

Echoes, 5, 386.

How to measure volume of, 5, 395.

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instruments, 5, 391.

Nature of, 5, 385.

Production of, 5, 384.

Properties of, 5, 388.

Reflection of, 5, 386.

Speed of, 5, 386; 13, 150.

Talking machines, 5, 394.

Waves, Length of, 5, 389, 390.

South African Republic, or the Transvaal.—A former republic of southern Africa, now a British possession. Capital, Pretoria; principal town, Johannesburg. The country is rich

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- in mineral products, and is noted for its diamond fields. Exports wool, ostrich feathers, hides and minerals. Area, 113,642 sq. miles.
- South American Revolution.**—The war through which the Spanish South American colonies became independent of Spain. The first outbreak took place in 1810, and after years of fierce struggle, the last Spanish stronghold was surrendered in 1826.
- Southampton.**—One of the principal seaports of Great Britain; the terminus of a number of steamship lines and port of call for transatlantic lines. It has extensive shipbuilding industries. Pop., about 70,000.
- South Australia.**—A British colony in central Australia. Area, 903,690 sq. miles; pop., about 400,000. Capital, Adelaide.
- South Carolina.**—One of the South Atlantic States, and one of the thirteen original states of the American Union. It has gold, porcelain, clay, and other minerals; is especially famous for its production of rice and sea island cotton. Pop., 1,340,316.
- South Carolina Exposition, 11, 397.**
- South Dakota.**—One of the North Central States of the United States. Its surface is rolling, mountainous in the west, and wheat is its most important agricultural product. Area, 77,650 sq. miles; pop., 401,570.
- Southern catalpa, 4, 419.**
Pacific railroad, 12, 348.
- Southey, Robert.**—(1774–1843.) A noted English poet and miscellaneous writer.
- South Sea Bubble.**—A financial scheme, originated in England in 1711, which failed, causing widespread ruin, in 1720.
- Southworth, Mrs. (EMMA D. E. NEVITT).**—(1818–1899.) An American novelist.
- Spain.**—A country of southwestern Europe, dividing with Portugal the Iberian peninsula. The government is a hereditary constitutional monarchy, legislative powers being lodged in the Cortes. In the 15th and 16th centuries it was the great world-power, but since that period its influence has steadily declined. It has a great export trade in wine, olive oil, fruits, etc. Area, 197,670 sq. miles; pop., nearly 18,000,000.
After the Saracens, 10, 280.
Beginnings of, 10, 245.
Congress declares war against, 11, 29.
Decline of, 10, 340.
directed to evacuate Cuba, 11, 29.
Moors conquer, 10, 238.
- Span, Length of a, 13, 147.**
- Spangled Hamburg fowl, 4, 106.**
- Spaniel dog, 4, 20.**
Blenheim, 4, 21.
- Spaniel dog — Continued.**
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King Charles, 4, 21.
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- Spanish-American War, 12, 375.**
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fairy tales, 3, 59.
fowl, 4, 106.
"Fury," 10, 299.
Mackerel, 4, 289.
Succession, War of the, 10, 318.
- Spanish Succession, War of.**—From 1701 to 1714, caused by the controversy over the succession in Spain after the death of Charles II. and carried on between France and her allies on one side and the Emperor and the naval powers on the other.
- Sparks, Jared.**—(1789–1866.) An American historian.
- Sparrow, 4, 169.**
Chipping, 4, 172.
Eggs of, 4, 120.
English, 4, 170.
Field, 4, 172.
Fox, 4, 172.
Lark, 4, 184.
Nest of, 4, 120.
Song, 4, 171.
Swamp, 4, 172.
Vesper, 4, 184.
- Sparrow hawk, 4, 141.**
Owl, 4, 144.
- Sparta, or Lacedæmon.**—An ancient Greek city of Laconia that rose to power after the legislation of Lycurgus. In the sixth century B. C. it was the most powerful city (or state) in Greece. Its citizens were noted for valor and severity of discipline. (See LYCURGUS, 10, 190.)
- Spartacus.**—A Thracian, Roman slave and gladiator, who headed an insurrection. Killed 71 B. C.
- Spathic iron ore, 5, 437.**
- Special education of girls, 2, 424.**
- Specialism, 8, 93.**
- Specialty, 13, 197.**
- Specie, 13, 197.**
payment, Gold and, 12, 275.

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- Specific gravity**, To find the, 5, 254.
Table of, 5, 254.
- "Spectator," The**.—A famous English periodical issued daily (1711-1712). Addison, Steele, Pope, and Hughes were its chief contributors.
- Spectroscope**, 5, 121.
- Spectrum**.—The image formed by refracted light, caused by passing a ray of sunlight through a prism, and displaying the seven primary colors as seen in the rainbow. (See **LIGHT**, 5, 302.)
- Specular Iron Ore**, 5, 436.
- Speech**, Association of ideas, 2, 107.
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W. T. Harris on, 2, 117.
- Speed, Approximate**, 13, 150.
- Spelling**, 13, 197.
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- Spencer, Herbert**.—(1820-1903.) A celebrated English philosopher, and author.
on the function of books, 2, 160.
observation, 2, 163.
punishment, 2, 222.
training the will, 2, 215.
- Spenser, Edmund**.—(1552?-1599.) A celebrated English poet.
- Sphenoid bone**, 1, 273.
- Sphere**, Celestial, 5, 106.
Finding the surface of a given, 13, 152.
solid contents of a given, 13, 152.
- Sphincter muscles**, 1, 279.
- Sphinx**.—Near the Great Pyramid in Gizeh, Egypt, a celebrated monster figure supposed to be older than the pyramids. The body, that of a lion, is 140 feet long; the head is 30 feet high from the chin to top of forehead; the face is expressive, despite its mutilations, of great dignity, strength, and thoughtfulness.
- Spica, a Star**, 5, 143.
- Spider**, 4, 321.
Hermit of the Sands, 4, 323.
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Tarantula, 4, 324.
Trapdoor, 4, 322.
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- Spider monkey**, 4, 66.
- Spiegel eisen**, 5, 220.
- Spinal accessory nerves**, 1, 284.
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- Spine**, 2, 411.
- Spinel**, To model a crystal of, 7, 257.
- Spinner, Francis Elias**, 7, 350; 12, 379.
- Spinster**, Legal rights of a, 13, 309.
- Spirit**, Methylated, 5, 230.
of wine, 5, 230.
Proof, 5, 230.
Rectified, 5, 230.
- Spitzbergen**.—A group of islands lying north of Norway in the Arctic Ocean. There are no permanent habitations here but the islands constitute a starting point for polar expeditions and are frequented by whalers.
- Splanchnic nerves**, 1, 284.
- Spleenwort**, 5, 80.
- Splices**, 6, 353.
Cut splice, 6, 354.
Eye splice, 6, 354.
Gromet, 6, 354.
Long splice, 6, 354.
Short splice, 6, 354.
- Spofford, Mrs. (HARRIET PRESCOTT)**.—Born, 1835. An American novelist and poet.
- Spofford, Ainsworth R.**—Born, 1825. Librarian of the Congressional Library, 1865-97.
- Spohr, Louis**.—(1784-1859.) A distinguished German violinist and composer.
- Spoils System**, 11, 282.
- Sponge**, 4, 381.
fisheries, 4, 383.
Grass, 4, 383.
Growth of, 4, 382.
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- Spontini, Gasparo Luigi Pacifico**, 9, 137.
- Spoonbill, Roseate**, 4, 226.
- Spoonwood**, 5, 12.
- Sports and Games**, Indoor, 6, 47.
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- Spotted sandpiper**, 4, 133.

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- Spottsylvania (Va.), Battle of**, 12, 140.
- Sprats, Lantern**, 4, 365.
- Spring Beauty**, 5, 44.
- Springer spaniel**, 4, 21.
- Springfield**.—(1) An important railway center and manufacturing town of Massachusetts. Pop. (1900), 62,059. (2) The capital of Illinois. Pop. (1900), 34,159. (3) A city of Ohio, a railroad and manufacturing center. Pop. (1900), 38,253.
- Springfield (N. J.), Battle of**, 11, 132.
- Spruce**, 4, 414.
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- Spruce beer**, 4, 416.
- Spruce partridge**, 4, 126.
- Spurius Cassius**, 10, 211.
- Spurs, Battle of the**, 10, 300.
- Squarcione, Francesco**, 9, 219.
- Square, Area of**, 13, 151.
 letter Alphabet, 7, 274.
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- Squash**, 5, 73.
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- Squash-bug**, 4, 358.
- Squid**, 4, 370, 371.
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- Squirrel as a pet**, 1, 153.
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- Squirrels in Central Park, New York**, 4, 60.
 State House Grounds, Richmond, Va., 4, 60.
- Sri Bhagavat**, 10, 19.
- Stael-Holstein, Anne Louise Germaine Necker, Baronne de (MADAME DE STAËL)**.—(1766-1817.) A celebrated French writer.
- Stage as a Career, The**, 7, 355.
- Staghound**, 4, 20.
- Stainer, Sir John**.—Born, 1840. An eminent English composer and organist.
- Stairs, Danger to a creeping child**, 2, 84.
 Teaching a child to climb, 2, 84.
- Stake-driver bird**, 4, 225.
- Stamens**, 5, 11.
- Stammering**, 2, 112.
- Stamp Act**, 11, 52, 132.
- Stamp collecting, Educational value of**, 2, 302.
 Ethics of the postage, 1, 89.
 tax on newspapers in England, 10, 381.
- Stand, Proper position to**, 2, 412.
 Teaching a child to, 2, 86.
- Standard, Battle of the**, 10, 261.
- Standish, Miles**, 11, 44.
- Stanfield, William Clarkson**, 9, 284.
- Stanford, Leland**, 12, 379.
- Stanislaus of Poland**, 10, 333.
- Stanley, Sir Henry M.**—(1839-1904.) Explorer and author. Found Livingston in Africa, 1871.
- Stanton, Edwin M c M a s t e r s.**—Statesman; sketch of, 12, 141.
- Stanton, Elizabeth Cady**.—Born, 1815. An American leader in the Woman's Suffrage movement, 1, 1; 8, 118.
- Stanz, Compact of**, 10, 276.
- Star-clock**, 5, 133.
- Star-fish**, 4, 309.
- Star-flower**, 5, 20.
- Star-gauges**, 5, 305.
- Star Spangled Banner**, 11, 258.
- Star-worship**, 10, 50.
- Starch**, 5, 240.
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 Scorpio, 5, 143.
 Sirius, 5, 141.
 Spica, 5, 143.
 Ursa Major, 5, 135.
 Ursa Minor, 5, 137.
 Vega, 5, 136.
 Virgo, 5, 143.
- Stars and Bars.**— This term, analogous to the "stars and stripes," indicated the flag of the Southern Confederacy. The flag consisted of "a red field with a white space extending horizontally through the center, and equal in width to one-third the width of the flag." The union was a blue square extending over the upper red and white stripes, bearing nine stars arranged in a circle.
- State, Admission of, 12, 185.**
 Debts, Assumption of, 11, 258.
 Department, 12, 395.
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- Staten Island.**— Containing the borough of Richmond, and constituting a county of New York. It is separated from Long Island by the Narrows. Length, 13 miles. Pop., about 67,000.
- States-General, 10, 342.**
States of Matter, 5, 253.
Stationer's Measure, 13, 150.
Statistics, Bureau of, 12, 396.
Statute of Frauds, 13, 128.
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- Staying power, 8, 257.**
- Stead, William Thomas.**— Born, 1849. English journalist; founder of the "Review of Reviews."
- Steamboat, "Clermont," 5, 281.**
 James Rumsey, 5, 277.
 John Fitch, 5, 277.
 William Symington, 5, 278.
- Steam engine, 5, 273, 276.**
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- Steam, Formation of, 5, 161.**
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Steam pump, Savery's, 5, 276.
Steam transportation, 13, 334.
Stearic acid, 5, 231.
Steel, Bessemer process, 5, 220.
 Cementation process, 5, 220.
 Manufacture of, 5, 217.
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- Steele, Sir Richard.**— (1672-1729.) A celebrated, British essayist, dramatist, and politician.
- Steen, Jan Havicksz, 9, 310.**
- Stegomyia, 4, 357.**
 fasciata, 4, 357.
- Stein, 10, 375.**
- Steinitz, William.**— Born, 1836. A noted German chess player.
- Stellar's Jay, 4, 153.**
- Stems of plants, 4, 394.**
- Stenographer, Qualifications of a good, 7, 345.**
Stenographers always in demand for Civil Service, 13, 360.
- Stenography, Civil Service tests, 13, 366.**
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- Stephen, Earl of Blois, 10, 261.**
Stephen of England, 10, 436.
Stephen III., Pope, 10, 260.
- Stephen, Leslie.**— Born, 1832. An English man of letters; editor for some years of "The Cornhill Magazine."
- Stephens, Alexander Hamilton, 12, 379.**
Stephenson, George, 8, 211; 14, 13.
- Stere, 13, 153.**
- Sterling, 13, 154.**
- Sterne, Laurence.**— (1713-1768.) A celebrated English novelist.
- Sterno-cleido-mastoid muscle, 1, 275.**
Sternum, or breastbone, 1, 273.
Stevens, Alfred George, 9, 410.
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Stevenson, Adlai Ewing, 12, 379.
Stevenson, Robert Louis Balfour.— (1850-1894.) A distinguished Scottish poet and novelist.
 A master of style, 8, 373.
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- Stewart, Alexander T., 1, 241.**
Stewart, Lieut. Charles, 11, 228.
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- Stilicho**, 1, 232, 402.
- Stinginess, To Cure**, 2, 272.
- Stings, Treatment of**, 1, 339.
- Stipa comata**, 5, 82.
 viridula, 5, 82.
- Stipules**, 4, 396.
- Stirling**.—Capital of the county of Stirling in Scotland; a royal and parliamentary burgh. It has important manufactures, but is especially noted for its historical interest.
- Stock**, 13, 215.
 common, 13, 109.
- Stockholder**, 13, 215.
- Stockholm**.—The capital and chief city of Sweden. It has large manufacturing and commercial interests and is an educational and art center.
- Stock market**, 13, 191.
- Stocks, Dealing in**, 13, 191.
- Stoics**.—Followers of Zeno, a Greek philosopher, who taught uncomplaining submission to the ills of life, etc. His school was founded about 308 B. C.
- Stomach**, 1, 277.
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- Stomata of plants**, 4, 393; 5, 40.
- Stone**, How measured, 13, 146.
- Stone, Charles Pomeroy**.—(1824-1887.) An American general and engineer.
- Stone, Lucy**, 14, 165.
- Stone, Nicholas**, 9, 408.
- Stonehenge**.—A prehistoric monument, remarkable for the large size of its stones, situated on Salisbury Plain, England.
- Stone River**.—See ROSECRANS, WILLIAM STARKE.
- Stonewall Brigade**, 12, 144.
- Stoneware, History of**, 1, 220.
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- Stony Creek (Can.), Battle of**, 11, 258.
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- Storer, Bellamy**, 12, 380.
- Stork**, 4, 226.
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- Stork, Caliph**, Arabian fairy tale, 3, 32.
- Story, Joseph**.—(1779-1845.) A distinguished American jurist.
- Story, William Wetmore**.—American sculptor, 9, 412.
 on Michelangelo, 9, 378.
- Storytelling**, Current objections to, 3, 8.
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 to children, 2, 152.
 Women are ideal story-tellers, 3, 6.
- Stoss, Veit**, 9, 393.
- Stowe, Harriet Beecher**, 8, 319.
- Strabo**.—(63-24 B. C.) A celebrated Greek geographer.
- Stradivari, Antonio**.—(1644?-1737.) A celebrated violin maker; the greatest the world has known.
- Strand**.—One of the famous streets of London.
- Strasbourg**.—The capital of Alsace-Lorraine. An important strategic point and fortress. Also a railway center and a manufacturing city. It has a famous cathedral, founded in the 11th century.
- Stratford-upon-Avon**.—A town of Warwick, England, famous as the birthplace of Shakespeare.
- Stratified rocks**, 5, 459.
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- Straus, Nathan**, on "Selling Goods," 13, 385.
- Strauss, David Friedrich**.—(1808-1874.) A famous German theological and philosophical writer.
- Strauss, Eduard**.—Born, 1835. An Austrian composer of dance music. Son of Johann Strauss.
- Strauss, Johann**.—(1804-1849.) A distinguished Austrian composer and conductor.
- Strauss, Johann**.—(1825-1899.) An Austrian composer, son of Johann Strauss; especially celebrated for his waltzes.
- Strauss, Joseph**.—(1827-1870.) An Austrian composer of dance music, son of Johann Strauss.
- Strawberry bird**, 4, 184.
- Street-cars**, 5, 398.
- Streight, Abel D.**, 12, 144.
- Streight's Raid**, 12, 144.
- Strength**, Faults of, 2, 285.
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Stuart, James Ewell Brown, 12, 145.
Stuart line of sovereigns, 10, 319.
Stubbs, William.—Born, 1835. An eminent English historian.
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Sturleson, Snorro, 10, 117.
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 A warning of nervousness, 2, 98.
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Stuttgart.—In the Kingdom of Württemberg, Germany; one of the most important manufacturing cities of the country; it takes the lead in book-publishing and is also an educational center. Pop., about 150,000.
Stuyvesant, Peter, 11, 47, 64.
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Style of a flower, 4, 397; 5, 11.
Stymphalus, Lake, 10, 106.
Styraciflua, 4, 456.
Styria.—In the Cisleithan division of Austria-Hungary, a crownland and titular duchy, having for its capital, Gratz. It has extensive agricultural and mineral industries, and important iron and steel manufactures.
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Sucker, 4, 301.
Suckling, Sir John.—(1609?-1642?.) An English poet and man of fashion, attached to the court of Charles I.
Sucre of Ecuador, 13, 155.
Sudermann, Hermann.—Born, 1857. A distinguished German dramatic poet.
Sue, Marie Joseph (EUGENE).—(1804-1857.) A celebrated French novelist.
Suetonius, 10, 236, 399.
Sueun-tih, 10, 158.
Suez.—(1) A seaport of Egypt. (2) ISTHMUS OF.—An isthmus connecting Asia and Africa.
Suez Canal.—A ship canal connecting the Mediterranean with the Red Sea, and thus avoiding the long sail around the cape of Good Hope. The canal, which is about 100 miles long, was begun in 1859 by a French company under direction of Ferdinand de Lesseps, and was completed in 1869. It is now under control of the British Government, 5, 401.
Suffioni, 5, 198.
Suffolk.—One of the principal agricultural counties of England.
Suffolk Dun cattle, 4, 16.
Suffrage, 13, 215.
Sugar.—A vegetable product of great commercial importance. It is mentioned as having been found in India 325 B. C. Sugarcane was first introduced into the U. S. in 1722, being cultivated by the Jesuits in Louisiana. The first sugar mill was built in 1758, near New Orleans. Sugar is made principally from the sugarcane but there is now a very extensive beet-sugar industry in many European countries, and a limited production in the United States, 5, 233.
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Suleiman, Pasha.—(1840-1892.) A noted Turkish general, 10, 258.
Sulla, Lucius Cornelius.—(138?-78 B. C.) A celebrated Roman general and dictator, 10, 218.
Sullivan, Sir Arthur S.—(1842-1900.) A noted English musical composer, successful especially as a writer of light operas.
Sullivan, Barry.—(1824-1891.) A noted English actor.

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- Sully, Thomas.**—(1783-1872.) A noted American portrait-painter.
- Sulphite process of paper making,** 5, 239.
- Sulphur,** 5, 449.
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 group of chemical elements, 5, 190.
 Properties of, 5, 190.
 Roll, 5, 190.
 Source of, 5, 190.
- Sulphuric acid,** 5, 191.
 Manufacture of, 5, 191.
- Sulphurous acid,** 5, 191.
- Sumach,** 4, 432.
 Canadian, 4, 433.
 Coral, 4, 434.
 Laurel, 4, 434.
 Poison, 4, 433.
 Smooth, 4, 433.
 Stag-horn, 4, 433.
 Venetian, 4, 433.
- Sumatra.**—The second largest island of the Malay Archipelago; separated from Java by the Strait of Sunda. Inhabitants, chiefly Malays; productions, coffee, sugar, rice, etc. Area, 170,744 square miles. Pop., about 3,000,000, 11, 15, 33.
- Summer duck,** 4, 110.
 Heat of, 5, 116.
 redbird, 4, 190.
 tanager, 4, 189.
- Sumner, Charles,** 12, 381.
- Sumter, Thomas.**—(1734-1832.) A noted American Revolutionary general.
- Sun, The,** 5, 118.
 Chromosphere, 5, 120.
 Corona, 5, 121.
 Distance from the earth, 5, 121.
 Faculæ, 5, 120.
 Gods of Egypt, 10, 67.
 Midnight, 5, 114.
 Moon, and Stars, 5, 105.
 Origin of the heat of the, 5, 122.
 Photosphere, 5, 119.
 prominences, 5, 121.
 Rice grains, 5, 120.
 spots, 5, 120.
 Symbolism of the, 2, 185.
 worship, 2, 185; 5, 119.
- Sunburn,** To remove, 1, 300.
- Sunda Islands.**—A group of islands in the Malay Archipelago.
- Sunday Laws,** 11, 64.
- Sun-dial,** 13, 94.
- Sundries,** 13, 215.
- Sunfish,** 4, 306.
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- Sunfish** — *Continued.*
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 Red-breast, 4, 306.
 Rock Bass, 4, 306.
 Strawberry Bass, 4, 306.
- Sunflower,** 5, 76.
 Fabled origin of, 1, 199.
- Sunken Piers,** 14, 36.
- Sunnyside.**—The home of Washington Irving, near Tarrytown, N. Y.
- Sunstroke,** First aid in, 1, 356.
- Superior, Lake.**—One of the chain of Great Lakes in the St. Lawrence system. The largest freshwater lake in the world. Area, about 32,000 sq. miles.
- Superior maxillary bones,** 1, 273.
- Superphosphate of lime,** 5, 209.
- Suphis, King,** 10, 179.
- Supinator radii teres muscle,** 1, 275.
- Supper** after theater or opera, 1, 53.
- Supreme Court,** 12, 242.
- Supreme Court Reports.**—The decisions of the Supreme Court from 1790 to date are included in more than 100 volumes.
- Sura,** 10, 10.
- Surabhi,** 10, 10.
- Suradevi,** 10, 10.
- Surety,** 13, 215.
- Surplus Revenue,** Distribution of, 11, 397.
- Surratt, Mrs. Mary E.**—Executed in 1865, as one of the conspirators in the plot to assassinate Abraham Lincoln.
- Surrey.**—A county of England containing a part of London and its suburbs.
- Surveying land,** 13, 163.
- Surveyor's linear measure,** 13, 147.
 Square measure, 13, 148.
- Surya,** 10, 28.
- Susquehanna.**—A river of N. Y., Pa., and Md. It rises in Otsego Lake, N. Y. and flows into Chesapeake Bay.
- Sussex.**—A maritime county of England. Chief industry, agriculture.
- Sussex spaniel dog,** 4, 21.
- Suttee.**—The burning of the widows of India upon the death of their husbands. The custom dates from ancient times and is not yet entirely abolished.
- Sutures,** 1, 273.
- Suy dynasty,** 10, 152.
- Swallow,** 4, 191.
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Swallow, Silas C., 12, 182.

Swallow, The Young, German fable, 3, 193.

Swamp, Great Dismal, 5, 430.

Swamp cotton tree, 4, 427.

Sparrow, 4, 172.

Swan, 4, III.

Black, 4, III.

"Swan song," 4, III.

Swan, Trumpeter, 4, III.

Whistling, 4, III.

Wild, 4, III.

Swansea.—A seaport town of Wales. A great manufacturing center, noted especially for its copper-smelting works. Pop., about 100,000.

Sweden.—A kingdom of Europe, occupying the eastern part of the Scandinavian Peninsula. Capital, Stockholm. Government, a hereditary constitutional monarchy; prevailing religion, Protestant. Chief industry, agriculture; exports, iron, lumber, wooden-wares, and hardware. Area, 172,876 sq. miles; pop., 5,000,000.

Swedenborg, Emanuel.—(1688-1772.) A celebrated Swedish philosopher and theosophist; founder of the New Church.

Swedish Fairy Tales, 3, 138.

Swedish Nightingale, The.—A name applied to Jenny Lind.

Sweet bay tree, 4, 411.

flag, 5, 55.

marjoram, 5, 66.

oil, 5, 6.

pea, 5, 64.

potato, 5, 76.

sop, 4, 475.

Sweyn, King of Denmark, 10, 249.

Swift, Chimney, 4, 193.

Glue-house, 5, 102.

Swift, Jonathan ("DEAN SWIFT").—(1667-1745.) A celebrated English author and satirist.

Swift, Lewis.—Born, 1820. A distinguished American astronomer.

Swimming, 6, 35.

Arm-stroke, 6, 36.

Inflated belt, 6, 35.

Leg-stroke, 6, 36.

Value of the knowledge, 1, 354.

Swinburne, Algernon Charles.—Born, 1837. A noted English poet.

Swinton, William.—(1833-1892.) An American journalist and author.

Swiss lace curtains, 1, 35.

Swithin's Day, St.—July 15; in honor of St. Swithin who lived in England in the 9th century.

Switzerland.—A republic of central Europe, lying north of Italy and east of France. It is a favorite resort for travelers, being noted for the grandeur of its mountains and the beauty of its lakes. Area, 15,976 sq. miles; pop., 3,000,000.

History of, 10, 275.

in the sixteenth century, 10, 307.

Swordfish, 4, 271.

Danger in fishing for, 4, 272.

Sycamore, 4, 409.

Cut-leaved, 4, 409.

Purple, 4, 409.

Subobtus, 4, 409.

Symbolism of, 4, 409.

Yellow, 4, 409.

Sydenham, Thomas.—(1624-1689.) A noted English physician.

Sydney.—(1) A seaport and important city of New South Wales, Australia. It is a steamship terminus and has extensive manufacturing interests. Pop., about 450,000. (2) A seaport of Cape Breton, Nova Scotia.

Symbolism of Precious Stones, The, 1, 193.

Symbols, Andrew Lang on, 2, 183.

Emerson on, 2, 183.

in chemistry, 5, 171.

Uses of, 2, 183.

Symphonies, 9, 113.

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Symptoms of Disease, 1, 313.

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Muffled cry, 1, 315.

Nasal cry, 1, 315.

Nervous cry, 1, 314.

Paroxysmal cry, 1, 314.

Peevish cry, 1, 314.

Posture, 1, 317.

Pulse, 1, 315.

Screaming cry, 1, 314.

Skin, The, 1, 319.

Sleepy cry, 1, 315.

Temperature, 1, 316.

Temper cry, 1, 315.

Tongue, 1, 318.

Urine, 1, 319.

Syracuse.—(1) The capital of the province of

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Syracuse, Sicily; founded by Corinthian colonists about 735 B. C. Noted for its antiquities. (2) An important city of New York; railroad and manufacturing center. Pop. (1900), 108,374.
"Syren," The, 11, 228.

Syria.—A country of Asiatic Turkey. Chief city, Damascus.

Syrian Gates, The.—A mountain pass between Syria and Cilicia; now called the Pass of Beilan.

Sze-ma Yen, 10, 152.

T

Tabasco.—(1) A state of Mexico, bordering on the Gulf of Mexico and having extensive agricultural interests. Principal exports, cacao and logwood. Pop., between 100,000 and 150,000. (2) A river of Mexico, flowing north into the Gulf of Mexico. Length, about 250 miles.

taken by Cortez, 11, 37.

Table manners, a social duty, 2, 307.

Good service an incentive to, 2, 306.

How to teach, 2, 304.

Social occasions to be utilized, 2, 306.

Tabor Mount.—A mountain of Palestine, famous in Old Testament history; said to be the scene of the transfiguration.

Tacitus, Cornelius.—(About 55–117 A. D.) A celebrated Roman historian and orator.

Tackmahack, 4, 429.

Tacks, 7, 210.

Tacoma.—A seaport and important commercial city of Washington; the terminus of the Northern Pacific Railroad. Pop. (1900), 37,714.

Tact and Common Sense, 14, 192.

Tadaka in Ramayana, 3, 324.

Tadema, Alma, Sir Laurence.—Born at Dronryp, Friesland, Netherlands. A noted painter, resident in England.

Tadpole.—See FROG, 4, 254.

Tael, Chinese, 13, 154.

Taft, Lorado.—Born, 1860. A noted American sculptor.

Taft, William H.—Born, 1857. The first civil governor of the Philippines under American rule. In 1904, he was appointed Secretary of War. When the trouble broke out in Cuba in 1906, Mr. Taft went there and arranged for administration of the affairs under a provisional government by the United States, 12, 181, 387.

Tagus, The.—The largest river in Spain. It forms part of the boundary between Spain and Portugal, and empties by two mouths into the Bay of Lisbon. Toledo is the chief town on its banks. It is 560 miles long.

Tai-chang, 10, 159.

Taiko-sama, 10, 167.

Tailor, How to succeed as a, 13, 423.

Taine, Hippolyte Adolphe.—(1828–1893.) An eminent French historian and critic.

Tai-tsoo, 10, 153.

Tai-tsung, 10, 154.

Tait, Peter Guthrie.—Born, 1831. A noted Scottish mathematician and physicist; professor of natural philosophy at Edinburgh University from 1860.

Taj Mahal, 10, 177.

Talebearing, Cause of, 2, 261.

Treatment of, 2, 261.

Talisman of good manners, 14, 107.

Talking machines, 5, 394.

Tallahassee.—The capital of Fla. Pop. (1900), 2,981.

Tallahatchie.—A river of Mississippi, about 250 miles long; navigable over 125 miles.

Tallapoosa.—A river of Georgia and Alabama, flowing into the Alabama. Length, 250 miles; navigable about 40 miles.

Talleyrand-Périgord, Charles Maurice de, Prince de Bénévent.—(1754–1838.) A celebrated French statesman and diplomatist, 10, 356.

Talmage, Thomas De Witt.—(1832–1902.) A noted American Presbyterian clergyman.

Born in Bound Brook, New Jersey; educated in law and later took a theological course at New Brunswick. He was pastor in Brooklyn for many years and drew large audiences by his sensational manner and utterances. His sermons were syndicated and published all over the country. He traveled extensively in Europe and the Holy Land. The latter part of his life was spent in Washington, D. C., where he died April 12, 1902.

Talmud, The.—The Jewish book of the traditional laws and regulations for every walk of life in accordance with the Biblical law of the Pentateuch. Its usual form is a 12mo book of 2,947 pages.

Tamarack, The.—See LARCH, 4, 458.

Tamarind, 5, 8.

Tamerlane, 10, 288.

Tamlane, Scotch fairy tale, 3, 128.

Tammany, 11, 258.

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- Tam O'Shanter.**—The hero of a famous poem by Robert Burns.
- Tampa Bay.**—An inlet of the Gulf of Mexico, on the western coast of Florida. It is a fine harbor and contains a number of islands. There is a lighthouse at its entrance. Length of bay, about 40 miles; width, from 5 to 15 miles.
- Tampico.**—A port of entry and important town of Mexico, engaged extensively in the export of hides, tallow, salted meat, and other animal products. Pop., about 10,000.
- Tamuz, 13, 102.**
- Tanager, 4, 189.**
Scarlet, 4, 189.
Summer, 4, 189.
- Tancred.**—Died, 1112. A hero of the first Crusade, 1096-99, 10, 258.
- Taney, Roger Brooke, 11, 397.**
- Tang, 10, 148, 152.**
- Tangier, or Tangiers.**—A seaport and the principal commercial center of Morocco, situated on the Strait of Gibraltar.
- "Tanglewood Tales," The.**—By Nathaniel Hawthorne, published in 1853.
- Tanjore.**—Capital of the district of Tanjore, a Mahratta state in India. A literary and religious center; and has important manufacturing interests. Pop., about 60,000.
- Tannhäuser.**—A Middle High German poet who flourished in the 13th century. The legend of Tannhäuser is the subject of one of Wagner's operas.
- Tannic Acid, 5, 244.**
- Tannin, 5, 244.**
- Tanning extracts, 5, 245.**
Oil, 5, 246.
Process of, 5, 244.
- Tantalus.**—A son of Zeus and Pluto, who, for revealing the secrets of the gods was afflicted with perpetual thirst and compelled to stand to his chin in water which receded when he attempted to drink of it; hence our word *tantalize*, 10, 103.
- Taoism.**—See CHINESE MYTHOLOGY, 10, 41.
- Taou Kwang, 10, 161.**
- Tapestry, 1, 36.**
Aubusson, 1, 36.
Carpet, 1, 33.
Cluny, 1, 36.
Gobelin, 1, 36.
Imitation, 1, 36.
- Tapioca meal, 5, 51.**
- Tappan, Arthur, 12, 2.**
- Tarantula, 4, 324.**
- Tare, 13, 220.**
- Tares of the Bible, 5, 64.**
- Tarifa, 10, 238; 13, 220.**
- Tariff, 13, 220.**
American, 13, 249.
of Abominations, 13, 221.
- Tarik, 10, 237.**
- Tarleton, Richard.**—Died in London, 1588. A famous comedian and clown.
- Tarpeian Rock.**—A part of the Capitoline Hill at Rome, so called from Tarpeia, daughter of the governor of the citadel, who opened the gates of the fortress to the Sabines in response to their promise that she should receive from them the gold adornments of their bracelets and collars. As the Sabines entered, they threw their shields upon Tarpeia crushing her to death. For a time, it was the custom in Rome to throw condemned criminals from the Tarpeian Rock.
- Tarpon, The, 4, 290.**
fishing, 4, 291.
- Tarquins, The.**—Kings of Early Rome.
TARQUINIUS PRISCUS.—(616-578 B. C.)
The fifth king of Rome.
TARQUINIUS SUPERBUS.—(534-510 B. C.)
The seventh and last king, 10, 210.
They were expelled from Rome by the angry citizens for the insult which Sextus the son of Superbus offered to Lucretia, the wife of Tarquinius Collatinus. This overthrow of the Tarquins raised the republican form of government in the city of Rome.
- Tarrytown.**—A village of Westchester Co., N. Y. The scene of the capture of André, in 1780; and the home and burial place of Washington Irving.
- Tarsus.**—In ancient geography, the capital and an important city of Cilicia, Asia Minor. The birthplace of the apostle Paul.
- Tartaric Acid, 5, 232.**
- Tartarus, 10, 102.**
- Tartini, Giuseppe.**—(1692-1770.) A noted Italian violinist, composer, and writer on music.
- Tascher, Joseph, 10, 422.**
- Taschereau, Elzéar Alexandre.**—(1820-1898.) Cardinal and archbishop of Quebec; he was made cardinal in 1886, and was the first Canadian upon whom the honor had been conferred.
- Tasmania (VAN DIEMEN'S LAND).**—In Australasia, south of Australia, an island and British colony. Capital, Hobart. Chief industries, agriculture and mining. Area, 26,385 sq. miles; pop., about 200,000.
- Tasso, Torquato.**—(1544-1595.) A celebrated Italian poet.
- Taste in furnishing, 1, 10.**
- Tatars, or Tartars.**—
(1) Tribes which originally inhabited the Chinese provinces of Manchuria and Mongolia.

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- (2) Mongolian, Turkish, and Tatar hordes who swept over Asia under Jenghiz Khan.
- (3) Those descendants who settled in Central Asia, Russia, Siberia, and the Crimea.
- Tatary.**—A name that formerly included the countries of Central Asia.
- Tate, Nahum.**—(1652-1715.) A British poet and dramatist.
- "Tatler," The.**—A famous publication established and edited by Steele, 1709-11. Steele and Addison were the contributors.
- Tatnall, Captain,** at Canton, 10, 161.
- Ta-tsing** dynasty, 10, 159.
- Tattam, Henry.**—(1788-1868.) A British Orientalist, and authority on Çoptic.
- Tattersalls'.**—A famous horse market of London, established about 1770 by Richard Tattersall.
- Tattling,** Cause of, 2, 261.
not to be encouraged, 2, 261.
- Tauchnitz, Christian Bernhard.**—(1816-1895.) A noted German publisher; originator of the well-known "Tauchnitz Edition" of British authors.
- Taunton.**—(1) An important manufacturing city of Massachusetts. Pop. (1900), 31,036.
(2) The capital of Somerset, England. Pop., about 20,000.
- Taurus.**—A mountain range of Asia Minor; in these mountains is the pass known as the Cilian Gates.
- Taurus (The Bull).**—See CONSTELLATIONS, 5, 140.
- Taxation,** 11, 259.
- Tax, Income,** 12, 305.
- Taxes, Direct.**—Congress is authorized by sec. 8, art. 1, of the Constitution to lay and collect taxes. It has been deemed necessary to lay direct taxes for national purposes only five times,—in 1798, 1813, 1815, 1816, and 1861. The last was at the beginning of the Civil War, when a direct tax of \$20,000,000 was levied to be proportionally assessed against all lots of ground with their improvements and dwelling houses. The operation of this act was suspended July 1, 1862, and Mar. 2, 1891, an act was passed refunding \$15,000,000 of this to the states. The earlier direct taxes were levied on houses, lands, and slaves.
- Taxidermy,** 4, 235.
- Tay.**—A river of Scotland, the longest in the country; noted for its salmon fisheries. Length, about 118 miles; navigable in part.
- Taylor, Bayard.**—American author; sketch of, 8, 321.
- Taylor, Jeremy.**—(About 1613-1667.) An English bishop; celebrated writer on theology, 14, 95.
- Taylor, Tom.**—(1817-1880.) A noted English dramatist and critic.
- Taylor, Zachary.**—Twelfth President; sketch of, 11, 314.
Presidency of, 11, 319.
- Tea, Afternoon,** 1, 52.
- Tea and the Sage,** Spanish fable, 3, 203.
- Tea, Consumption of,** 13, 348.
Cultivation of, 5, 76.
- Teachers** are only mortal, 2, 452.
Character of, 2, 453.
Good health necessary, 2, 452.
Mothers' association with, 2, 455.
- Teak,** 5, 8.
- Teasing,** 2, 298.
- Teaspoonful,** 13, 149.
- Technique,** Paganini quoted on musical, 9, 189.
- Technites,** 10, 81.
- Tectonia,** 5, 8.
- Tecumseh,** 11, 259.
- Teen-Ke,** 10, 159.
- Teeswater Cattle,** 4, 16.
- Teeter-tail sandpiper,** 4, 133.
- Tehuantepec, Isthmus of.**—An isthmus connecting the Gulf of Campeche and the Gulf of Tehuantepec; situated in southeastern Mexico.
- Telegraph** described, 5, 316.
Enlisting in the army of the, 5, 358.
First line, between Baltimore and Washington, 5, 341.
Growth of the, 5, 344.
Laying the Atlantic Cable, 5, 348.
Morse's alphabet, 5, 345.
system, 5, 337.
Operator, Pay of a, 5, 360.
Work of a, 5, 360.
Statistics, 13, 343.
- Telegraphy,** an occupation for women, 7, 379.
- Telegraphy, Duplex and Quadruplex.**—An invention that worked a revolution in the use of the telegraph; by it two or four messages, respectively, may be transmitted simultaneously over a single wire. (See EDISON, THOMAS ALVA.)
Edison's improvements in, 5, 331.
Morse's inventions in, 5, 337.
Wireless, 5, 322.
- Tel-el-Kebir.**—A town of lower Egypt situated on the Nile about 50 miles from Cairo. The defeat by the British under Wolseley of the insurgent Egyptians under Arabi Pasha (Sept. 13, 1882), compelled the latter to surrender.
- Telemachus.**—See STORY OF THE ODYSSEY, 3, 383.
- Telephone.**—The telephone is an instrument designed to reproduce sounds at a distance by means of electricity. Professor Graham Bell's articulating telephone was produced in 1877:

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- Communication by telephone between New York and Chicago (1,000 miles), was opened in 1893; between Paris and Marseilles (563 miles) in 1888, and between London and Paris in 1891.
- Telephone, The.**—See BELL, ALEXANDER GRAHAM.
- Development of the, 5, 325.
- Statistics, 13, 343.
- Telescope invented by Galileo**, 10, 279.
- Tell a story**, How to, 3, 6.
- Tell, William.**—A legendary hero of Switzerland, active in the struggle for independence of certain cantons of his country.
- Teller, Henry Moore**, 12, 387.
- Telloh**, Pottery remains at, 1, 216.
- Tempe, Vale of.**—A valley of Thessaly, Greece, famous from ancient times for the beauty of its scenery.
- Temper**, Displays of, 2, 266.
- How to combat, 2, 313.
- Temperament of children**, 2, 97.
- Classification of, 2, 97.
- Considered in punishing, 2, 226.
- Mothers should study, 2, 97.
- Temperature, a symptom in disease**, 1, 316.
- Tempering Steel**, 5, 221.
- "Tempest, The."**—A play by Shakespeare, published in 1623; performed in 1611.
- Templars.**—A military order of Knights which was founded at Jerusalem in 1118, aimed chiefly to protect pious pilgrims from the attacks and persecution of the Turks during their pilgrimages to visit the tomb of Christ at Jerusalem. The order was suppressed by the Council of Vienna in 1312.
- Temple, Sir William.**—(1628-1699.) An English statesman, diplomatist, and writer.
- Temple, The.**—The sacred edifice of the Jews at Jerusalem. Three were erected in succession upon the same site. They took their names from the builders and were (1) The Temple of Solomon (586 B. C.); (2) The Temple of Zerubbabel (537 B. C.), and (3) The Temple of Herod which was completely destroyed by the Romans when they took the city in 70 A. D.
- Temple Bar.**—A gateway in front of the Temple in London, which, until its removal and reërection at Waltham Cross, in Herts (1878), divided Fleet Street from the Strand.
- Temporal bones**, 1, 272.
- Temporalis muscle**, 1, 275.
- Tenants**, 13, 186, 222.
- and landlords, 13, 121.
- in common, 13, 222.
- Joint, 13, 121.
- Tenderfoot.**—An epithet applied, in good-natured derision, to a person from the East who appears in a mining camp or on a cattle ranch in the far West. Such a one in years past, was likely to pass through an experience similar to that of "hazing" a college freshman.
- Tendo Achilles**, 1, 276.
- Tenedos.**—An island off the west coast of Asia Minor, near the Dardanelles. It was here that the Greek ships were moored during the Trojan War.
- Teneriffe.**—The largest of the Canary Islands; contains the capital of the islands, Santa Cruz de Santiago. Length, 60 miles.
- Teneriffe, Peak of (PICO DE TEYDE).**—On the Island of Teneriffe, a volcano, the highest summit of the islands. Height, 12,182 feet.
- Teniers, David, The Younger.**—Famous Flemish painter, 9, 295.
- Tennessee.**—A river of Tennessee, Alabama, and Kentucky; the principal tributary of the Ohio. Length, about 1,200 miles, for the most part navigable.
- Tennessee.**—One of the South Central States of the United States of America. Capital, Nashville. Bounded on the north by Kentucky and Virginia; on the southeast by North Carolina; south by Georgia, Alabama, and Mississippi; on the west by Arkansas and Missouri. It is chiefly an agricultural state but has valuable manufacturing interests. Area, 42,050 sq. miles; pop. (1900), 2,020,616.
- Tennessee, Army of.**—One of the grand divisions of the Confederate army during the Civil War. It operated chiefly in the middle west, and its principal battles were Fort Donelson, Shiloh, Perryville, Stone River, Chickamauga, Missionary Ridge, Lookout Mountain, the Atlanta Campaign, Franklin and Nashville. Its successive commanders were Generals Albert Sidney Johnson (killed at Shiloh), Braxton Bragg, Joseph E. Johnston, and John B. Hood.
- "Tennis-court Oath,"** 10, 343.
- Tennyson, Alfred**, first Lord Tennyson.—(1809-1892.) A celebrated English poet.
- He was the first Lord Tennyson, having been raised to the peerage in 1884. He succeeded Wordsworth as poet laureate in 1850. He was buried in the Poets' Corner, near Chaucer, in Westminster Abbey, 1, 80.
- Tenure of Office Act.**—Under the Constitution, the appointing power resides in the President, who exercises it by and with the consent of the Senate. In his difficulties with Congress, President Johnson was accused of corruptly using this power, and in the second session of the 39th Congress a bill "to regulate the tenure of certain officers" was introduced, and on Mar. 2, 1867, passed over the President's

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- veto. This law secured in their offices, with some few exceptions, all officials appointed with the concurrence of the Senate until such time as their successors should, in like manner, be named. Johnson, when he suspended Secretary of War Stanton, violated the law, and his course resulted in an attempt to impeach him in 1868. The law was repealed in 1887.
- Teplitz, or Töplitz.**—A town and famous watering place of northern Bohemia.
- Ter Borch, Gerard,** 9, 307.
- Terence.**—(c. 185–159 B. C.) A celebrated Roman comic poet. He was born at Carthage and was taken to Rome, a slave; but was soon freed. His works consist of six comedies, patterned after and largely influenced by the Greek comedians.
- Terhune, Mrs. (MARY VIRGINIA HAWES);** pseudonym, **MARIAN HARLAND.**—An American novelist and miscellaneous writer.
- Tern,** 4, 218.
Black, 4, 219.
Common, 4, 218.
- Ternel,** 10, 244.
- Terpsichore.**—One of the Muses, patroness of the choral dance, etc., 10, 92.
- Terrapin.**—The name given to various species of fresh-water tortoises, of the family *Emyda*. The flesh is esteemed as a food.
- Terre Haute.**—An important manufacturing and railroad center of Indiana. Pop. (1900), 36,673.
- Terrier,** 4, 21.
Black-and-tan, 4, 21.
Bull, 4, 22.
Dandy Dinmont, 4, 21.
English, 4, 21.
Fox, 4, 21.
Maltese, 4, 21.
Rat, 4, 21.
Scotch, 4, 21.
Skye, 4, 21.
Yorkshire, 4, 21.
- Territories,** 12, 387.
- Terry, Ellen.**—Born at Coventry, England, 1847. A noted English actress, 14, 303.
- Tertullian (QUINTUS SEPTIMIUS FLORENS TERTULLIANUS).**—(150–230 A. D.?) A celebrated ecclesiastical writer, a father of the Latin Church.
- Tesla, Nikola.**—Born in Austria-Hungary, 1857. A distinguished physicist and electrician.
- Test Act,** 10, 326.
- Testator,** 13, 222.
- Testatrix,** 13, 222.
- Tether ball,** 6, 235.
- Tetzel,** 10, 291.
- Teutons,** 10, 233.
- Tewkesbury.**—In England, a town of Gloucestershire, noted for its fine church of the 12th century, 10, 274.
- Texas.**—One of the South Central States of the United States of America; the largest state of the Union. Capital, Austin. Texas borders upon Mexico and the Gulf of Mexico; its chief industry is agriculture. Area, 265,780 sq. miles; pop. (1900), 3,048,710, 12, 320.
- "Texas," The,** 12, 387.
- Textile fabrics,** Women designers of, 7, 403.
- Thackeray, William Makepeace.**—(1811–1863.) A celebrated English critic, satirist, and novelist. His most famous books are "Vanity Fair" and "Henry Esmond," which latter is probably the greatest English historical novel, 14, 15.
Style of, 8, 376.
- Thalberg,** 14, 37.
- Thales.**—(640–546 B. C.) An ancient philosopher of the Ionian school. He was one of the seven wise men of Greece. He was famous as a geometer and astronomer. It is said that he foretold an eclipse of the sun for May 28, 585 B. C.
- Thalia,** 10, 92.
- Thames.**—The most important river of Great Britain. It rises near Cirencester, in Gloucestershire, England, and flows into the North Sea. Its general direction is easterly. Length, to Sheerness about 228 miles.
- Thames (Canada), Battle of,** 11, 259.
- Thanet, Octave.**—Pseudonym of Miss Alice French, a contemporary American novelist and miscellaneous writer.
- Thang, Praise of,** 10, 35.
- Thanksgiving Day,** 11, 44, 13, 99.
Story, A, 2, 342.
- Thayer, Major Sylvanus,** 12, 336.
- The New Nurse, A Story,** 2, 363.
- Theater parties,** 1, 53.
- Theban War,** 10, 200.
- Thebes.**—(1) A city of ancient Egypt, was situated upon both sides of the Nile. The village of Luxor is near the site. Remarkable remains of antiquity are found here, including the colossal statues of Memnon, the temple of Ramesses I., and the temples of Karnak and of Luxor.
(2) The chief city of Bœotia in ancient Greece. It was prominent in the strife for supremacy between Thebes, Athens, and Sparta. It was besieged and almost destroyed by Alexander the Great, and fell into decay under the Roman rule.
- Theine,** 5, 249.
- Themistocles,** 10, 195, 196.

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- Theobroma cacao**, 4, 484.
- Theodora**, 10, 404.
- Theodoric**, the Ostrogoth, 10, 233.
- Theodosius**, 10, 232, 236, 259.
- Theophrastus**.—(372-287 B. C.?) A Greek philosopher, follower and successor of Aristotle.
- Thermidor**, 13, 97.
- Thermometer**, 5, 268.
Centigrade, 5, 268.
Fahrenheit, 5, 268.
Reaumur, 5, 268.
- Thermopylæ**.—In ancient geography, a narrow pass connecting northern and southern Greece. It led from Thessaly to Locris, and was the scene, 480 B. C., of one of the fiercest battles of the Persian wars, 10, 195.
- Theseus**.—See Greek and Roman Mythology, 10, 102, 109.
- Thessaly**.—In ancient times, a district forming the northeastern division of Greece; made famous in Greek legend.
- Thiers, Louis Adolphe**.—(1797-1877.) An eminent French statesman and historian, 10, 384; 14, 354.
- Third estate**, 10, 265.
- Thirty Years' War, The**.—In Central Europe; involving Germany and other countries and occasioned by the friction between the Protestants and the Roman Catholics. Commenced in 1618 and ended with the peace of Westphalia, 1648, 10, 308.
- Thistle**, National flower of Scotland, 1, 200.
- Thomas, George Henry**.—Soldier; sketch of, 12, 147.
- Thomas, Theodore**.—Born at Hanover, 1835. A distinguished American musical conductor.
- Thomas à Becket**.—Born, 1118; slain in Canterbury Cathedral, 1170. An English prelate, archbishop of Canterbury, 10, 261.
- Thomas à Kempis (THOMAS HAMMERKEN)**.—(1380-1471.) A German mystic and ascetic; said to have written the "Imitation of Christ."
- Thompson, James**.—(1700-1748.) A British poet.
- Thompson, Richard Wigginton**, 12, 388.
- Thompson, William, Sir (LORD KELVIN)**.—(1824-) Famous British physicist and mathematician; has made important investigations in the domain of heat, electricity, and magnetism. Was president of the British Association in 1871.
- Thor (Norse Mythology)**, 10, 124.
- Thoreau, Henry David**.—(1817-1862.) A noted American writer.
- Thorn**, Black, 4, 422.
Cockspur, 4, 420.
Dotted-fruited, 4, 422.
- Thorn**—*Continued*.
English hawthorn, 4, 421.
Pear, 4, 422.
Scarlet-fruited, 4, 420.
Scarlet-haw, 4, 421.
White, 4, 420.
- Thornycroft, Walter Hamo**.—A famous English sculptor, was born in London in 1850, 9, 410.
- Thoroughness, The Economy of**, 14, 216.
- Thoroughwort**, 5, 36.
- Thorvaldsen**.—Danish sculptor, 9, 404, 405; 14, 344.
- Thoth**, 10, 78.
- Thothmes I.**—About 1633 B. C. An Egyptian king of the 18th dynasty. A great warrior.
- Thothmes II.**—About 1600 B. C. Son of Thothmes I. One of Egypt's great kings; 18th dynasty.
- Thought, at What Rate Does it Travel**, 5, 421.
- Thousand Islands, The**.—Situated in an expansion of the St. Lawrence River which extends about 40 miles from its junction with Lake Ontario. Their number is estimated at from 1,500 to 1,800, and they are famous for the beauty of their scenery.
- Thrasher, Brown**, 4, 162.
- Thread game for children**, 2, 423.
- Three-bears**, English fairy tale, 3, 124.
- Three wishes**, English fairy tale, 3, 121.
- Three-dollar Piece**.—A. U. S. gold coin of 77.4 grains, authorized in 1853. Its coinage was discontinued in 1890.
- Three Rivers**.—An important manufacturing and commercial town of Quebec, Canada. Pop., about 9,000.
- Thrift**, Educating children to, 7, 441.
- Throat, Sore**, Treatment of, 1, 322.
- Thrush**, Treatment of, 1, 331.
- Thrush, The**, 4, 159, 161.
Brown, 4, 162.
Golden-crowned, 4, 186.
Hermit, 4, 162.
Water, 4, 162.
Wilson's, 4, 161.
Wood, 4, 161.
- Thucydides**.—(471-401? B. C.) A celebrated Greek historian.
- Thuja occidentalis**, 4, 457.
- Thule**.—The name given by Pytheas, the Greek navigator, to a place lying north of Great Britain, the identity of which has been for many centuries a subject of investigation and controversy.
- Thumb-tacks**, 7, 268.
- Thurber, Frances B.**, 13, 389.
- Thuringia**.—A region of Central Germany;

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- now comprising the states of Saxe-Altenburg, Saxe-Coburg-Gotha, Saxe-Meiningen, Saxe-Weimar-Eisenach, Schwarzburg-Rudolstadt, Schwarzburg-Sondershausen, Reuss (elder line), Reuss (younger line), parts of Prussia, etc.
- Thurman, Allen Granbery**, 12, 388.
- Thursby, Emma**.—Born, 1857. A noted American soprano.
- Thwarting children**, 2, 205.
- Thwing, Charles Franklin**, 8, 77, 138, 201.
- Tiamat**, 10, 52.
- Tian-Shan, or Thian-Shan**.—A mountain system of Central Asia; highest summit about 24,000 feet.
- Tiber**.—A river of Italy, flowing into the Mediterranean Sea. Length, about 250 miles.
- Tiberias**.—A town of Palestine, founded in the 1st century A. D., and long the educational center of the Hebrews. Pop., about 3,000.
- Tiberias**.—(1) TIBERIAS CLAUDIUS NERO CÆSAR. (42 B. C.—37 A. D.) A Roman Emperor; noted for his cruelty and vices. (2) Byzantine emperor (578–582).
- Tibet, or Thibet**.—A dependency of China, in Central Asia. Area, about 750,000 sq. miles; pop., nearly 2,000,000.
- Tibeth**, 13, 102.
- Tibialis anticus muscle**, 1, 276.
- Tibia**, long bone of the leg, 1, 274.
- Tick**, 4, 321.
Cheesemite, 4, 321.
- Tickell, Thomas**.—(1686–1740.) An English poet, a friend of Addison.
- Tickets**, in voting, 12, 432.
- Ticonderoga**.—A town of New York, noted as the scene of several Revolutionary engagements.
- Ticonderoga, Capture of**, 11, 133.
- Tides**, 5, 117.
Spring, 5, 117.
- Tidiness**, 2, 320.
- Tieck, Christian Friederich**, 9, 403.
- Tientsin**.—An important trade center of China. Pop., about 1,000,000.
- Tierra del Fuego, or Terra del Fuego**.—An archipelago lying off the extreme southern coast of South America, from which it is separated by the Strait of Magellan.
- Tiers Etat**.—Those of the French people who belonged neither to the nobility, the clergy, nor the peasantry; principally burghers, who sent representatives to the States-general. The name became conspicuous through the efforts of these representatives in the last French States-general to secure rights and power equal to that of the other two classes, 10, 265, 342.
- Tietjens, or Titians, Therese, Johanna Alexandra**.—(1831–1877.) A noted Hungarian soprano.
- Tiflis**.—The capital and chief commercial city of the government of Tiflis, in Russia, the most important city of Caucasia. Pop., about 100,000.
- Tiger, The**, 4, 79.
- Tiglath-Pileser**.—The name given to three great Assyrian kings, who reigned respectively, 1120–1100, 950–930, and 745–727, B. C., 10, 181, 184.
- Tigris**.—A great river of Asiatic Turkey, flowing into the Euphrates. Length, about 1,000 miles. Navigable to Bagdad for small vessels.
- Tilden, Samuel Jones**, 12, 388.
nominated for president, 12, 159.
- Tilia Americana**, 4, 424.
Europæa, 4, 424.
heterophylla, 4, 424.
pubescens, 4, 424.
- Tilletia foetans**, 5, 98.
tritici, 5, 98.
- Tilly, Count of (JOHANN TSERCLAES)**.—(1559–1632.) A celebrated general of the Spanish, Bavarian, and Imperial service. He was victorious in 36 battles, 10, 308.
- Tilsit**.—A manufacturing and commercial town of Prussia. Famous for the treaty, between France on one side and Russia and Prussia on the other, arranged there in 1807. Pop., about 25,000, 10, 349.
- Tilton, Theodore**.—An American poet, editor, and lecturer, was born in 1835. He was editor of the "Independent." He is known on account of his suit against Henry Ward Beecher, begun in 1874, upon which the jury disagreed.
- Timber-culture Act**, 12, 388.
- Timbuktu, or Timbuctoo**.—In Africa, near the southern limit of the Sahara. An important commercial city. Pop., about 20,000.
- Time**, Cause of difference of, 5, 111.
Difference of, 13, 104.
Sidereal, 5, 112.
Standard, 5, 112.
- Timidity** distinguished from weakness, 2, 245.
- Timon**.—In the latter part of the 5th century B. C. An Athenian misanthrope; the subject of Shakespeare's tragedy, "Timon of Athens."
- Timor**.—An island of the Malay Archipelago, claimed by the Netherlands and Portugal. Area, about 12,000 sq. miles.
- Timothy grass**, 5, 89.
Origin of name of, 5, 89.
- Timur, or Timour**.—(1333–1405.) A famous Tatar conqueror, 8, 261; 10, 157, 288.

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- Tin** amalgam, 5, 217.
 Banca, 5, 217.
 Block, 5, 217.
 foil, 5, 217.
 ores, 5, 439.
 Cassiterite, 5, 439.
 Tin-stone, 5, 439.
 Sources of, 5, 216.
- Tinchebrai, Battle of**, 10, 261.
- Tintoretto**, 9, 251.
- "Tippecanoe and Tyler Too,"** 11, 292.
- Tippoo Sahib**.—(1749-1799.) Sultan of Mysore, son of Hyder Ali; won distinction in the Marhatta War 1775-79.
- Tip-up Sandpiper**, 4, 133.
- Tishri**, 13, 102.
- Tissaphernes**.—A Persian satrap, put to death, 395 B. C. He was appointed chief ruler of western Asia by Artaxerxes; defeated in battle by Agesilaus, 395.
- Tissot** (JAMES JOSEPH JACQUES).—(1836-) Noted French *genre* painter.
- Titian**.—Italian painter, 9, 246.
- Titicaca, Lake**.—A large and important lake of South America, lying in a basin of the Andes, 12,645 feet above the sea. Length, about 100 miles. Area, 3,200 sq. miles.
- Titus** (TITUS FLAVIUS SABINUS VESPASIANUS).—(40-81 A.D.) A Roman emperor called "the delight of mankind." He finished the Colosseum and built the Baths of Titus, 10, 227. destroys Jerusalem, 10, 185.
- Titus Oates**, 10, 326.
- Tivoli**.—A town of Italy, about 15 miles from Rome. Noted for its castle and other antiquities.
- Toad**, 4, 259.
 Eggs of the, 4, 259.
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 Skin of the, 4, 260.
 Surinam, 4, 260.
 Tree, 4, 260.
 Usefulness of the, 4, 259.
- Toads and Diamonds**, French Fairy Tale, 3, 85.
- Tobacco**, 5, 77.
 Maryland, 5, 77.
 Virginia, 5, 77.
- Tobago**, or **Tabago**.—An important island of the British West Indies. Capital, Scarborough. Area, 114 sq. miles.
- Tobias, Prayer of**, 1, 194.
- Tobogganing**, 6, 299.
- Tobolsk**.—The capital of the government of Tobolsk in Western Siberia. It has a number of commercial interests. Pop., about 25,000, 11, 25.
- Tocantins**.—A large and important river of Brazil, flowing into the Atlantic Ocean. Length, about 1,900 miles, a great part of which is navigable.
- Tocqueville, Alexis Charles Henri Clérel de**.—(1805-1859.) Celebrated French writer and statesman.
- Todd, Mary**, 11, 412; 12, 388.
- Todhunter, Isaac**.—(1820-1884.) An English mathematician; author of a number of mathematical text-books.
- Todleben, General**, at Plevna, 11, 12.
- Tokio**.—The capital and an important commercial center of Japan. Pop., about 1,200,000.
- Tolbiac, Battle of**, 10, 405.
- Toledo**.—(1) A city and port of Ohio; a railroad, manufacturing, and commercial center. Pop. (1900), 131,822. (2) The capital of the province of Toledo, Spain.
- Toledo War, The**.—A dispute between Ohio and Michigan, 1835, regarding the state boundary. It resulted in favor of Ohio.
- Toliekona**, 10, 156.
- Tolosa, Battle of**, 10, 280.
- Tolstoi, Count Lyeff, or Lyoff, Nikolaievich**.—Born, 1828. A famous Russian novelist and social reformer, 1, 244.
 quoted on work, 2, 330.
- Tolu, Balsam of**, 5, 244.
- Tomas de Iriarte**, 3, 202.
- Tomato**, 5, 78.
- Tombs, The**.—A noted prison of New York City, built 1838.
- "Tom Jones"**.—The title of a famous novel by Fielding, published 1749.
- Tomsk**.—The capital of the government of Tomsk, western Siberia. One of the most important of Siberian cities, situated in a rich mining region. Pop., about 50,000.
- Ton, Long**, 13, 150.
- Tonawanda**.—An important lumber center of New York. Pop. (1900), 7,421.
- Tone**, Emotional effect of, 9, 7.
- Tongking, Tonquin, or Tonkin**.—A French colony in Farther India, bordering on the Gulf of Tongking and south of China. It was ceded to France by China in 1885. Rice, silk, and tin are the chief products. Pop., over 9,000,000, 10, 163.
- Tongue**, a symptom in disease, 1, 318.
- Tonneau**, 13, 153.
- Tonsilitis, Treatment of**, 1, 324.
- Tooke Horne** (JOHN HORNE).—(1736-1812.) An English politician and philologist.
- Tools** and workbench for teaching industry, 2, 325.
 Care of, 7, 198.
 Dexterity in the use of, 2, 325.
 Sharpening, 7, 200.
- Toombs, Robert**, 12, 388.

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- Tooth rash**, Treatment of, 1, 337.
- Topaz**, 1, 197.
- Topeka**.—The capital of Kansas, is situated on the Kansas River. It is an important railway center and the seat of Washburn College. Pop. (1900), 33,608.
- Torch thistle**, 5, 92.
- Tories**, 11, 52; 12, 389.
- Toronto**.—The capital of the province of Ontario, Canada, and second city of the dominion in point of population. An important commercial and railroad center. Pop., about 200,000.
- Torpedo, Submarine**.—Earliest experiments with (see FULTON, ROBERT).
- Torpedo**, 4, 277.
- Torrentius, Herman**, 8, 27.
- Torres Vedras**, 10, 358.
- Torricelli**.—(1608-1647.) Famous Italian physician and mathematician.
- Tortoise**.—See TURTLES, 4, 255.
- Tortuga**.—An island, about 20 miles in length, lying off the north coast of Haiti; once a resort of the buccaneers. It is a possession of Haiti.
- Toucan, The**, 4, 210.
- Touch**, Developing the sense of, 2, 76.
- Touch-me-not**, 5, 18.
- Touch Typewriting**, 13, 222.
- Toulon**.—An important seaport in the department of Vâr, France. The second naval station in France and has an extensive export trade. Pop., about 800,000.
- Toulouse**.—A city of France; the ancient Tolosa. It has a fine cathedral, and several noted educational institutions. Also considerable trade in wine, etc. Pop., about 200,000.
- Toulouse goose**, 4, 109.
- Touraine**.—An ancient government of France, which corresponded very nearly to the present department of Indre-et-Loire. Capital, Tours.
- Tourgee, Albion Winegar**.—Born, 1838. An American novelist and lawyer.
- Tourguénief**.—See TURGENIEFF.
- Tours**.—In France; capital of the department of Indre-et-Loire, and an important manufacturing city. Pop., about 65,000.
Battle of, 10, 238, 259.
- Town and Country Mouse**, English fable, 3, 201.
- Towne, Charles Arnette**, 12, 389.
- Townsend, George Alfred**: pseudonym GATH.—Born, 1841. A noted American journalist, author, and war correspondent.
- Townsend, Professor L. T.**, 8, 37.
- Townsend, Virginia Frances**.—Born, 1836.
An American novelist and historian.
- Township**, Section of a, 13, 148.
Size of a, 13, 148.
- Towton, Battle of**, 10, 274.
- Toxorhynchites**, 4, 357.
- Toy Factory, Largest, in the World**.—The largest toy factory in the world is in New York City where playthings in tin are manufactured literally by the million. It stands five stories high, and turns out 1,607 distinct varieties of tin toys. No. 1 in the catalogue is a tin horse; 1,607, a tin menagerie. The output of circular tin whistles is twelve million per annum. To make a tin horse twelve inches long, dies have to be cast costing 3,000. Jumeau, of Paris, makes 2,000 dolls a day, nearly all of considerable size; every year France exports toys to the value of three millions sterling, chiefly dolls; of which toy in various sizes 26 millions are estimated to be manufactured and sold in Europe annually. Toys are imported to England chiefly from Germany and Holland, the former country sending us an annual supply of the average value of \$1,600,000; that from Holland being worth \$625,000; from France, \$450,000; and that from Belgium over \$350,000. Nuremberg, in Bavaria, is the great center of the German manufactures of this kind, whence come what are known as "Dutch" toys. All the tin soldiers, packed in wooden boxes, produced in Germany, come from Sonneberg, in the Duchy of Saxe-Meiningen.
- Toys**, American, 2, 135.
An expression of a nations characteristics, 2, 135.
Ball, 2, 137.
Bell, 2, 138.
Building blocks, 2, 138.
Chinese, 2, 135.
Comic, 2, 462.
Dolls, 2, 138.
Educational value of, 2, 135.
Egyptian, 2, 134.
French, 2, 135.
German, 2, 135.
Japanese, 2, 135.
Rubber ring, 2, 137.
suitable for various ages, List of, 2, 136.
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- Toy-spaniel dog**, 4, 21.
- Trachea, or windpipe**, 1, 291.
- Tracy, Benjamin Franklin**, 12, 389.
- Trade**, Balance of, 13, 21.
discount, 13, 227.
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- Trade-Schools**, 13, 257.

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Trades Unions, 13, 241.

Tradescant, John, 4, 407; 5, 79.

Trafalgar, Battle of.—Fought off the coast of Cape Trafalgar, Oct. 21, 1805. The greatest British naval victory of the Napoleonic Wars, 10, 349, 353.

Trailing Arbutus, The, 5, 10.

Trained men needed, 8, 200.

Training for larger life, 8, 130.
the will, 2, 208.

Trajan (MARCUS ULPUS TRAJANUS), surnamed DACICUS and PARTHICUS.—(About 53-117 A. D.) A celebrated Roman Emperor, 98-117, 10, 228.

Transit duty, 13, 241.

Transportation, Cost of, 13, 335.
Effect of steam on, 13, 334.
Modes of, 5, 396.

Trans-Siberian Railway, 11, 27.

Transvaal annexed to England, 11, 19.
Gold discovered in, 11, 19.

Transylvania.—A titular grand principality of the Austrian Empire, incorporated with Hungary in 1868. Area, 21,512 sq. miles.

Trapezium, 7, 249.
To find the area of, 13, 151.

Trapezium bone, 1, 274.

Trapezius muscle, 1, 275.

Trapezoid, 7, 248.
To find the area of a, 13, 151.

Trapezoid bone, 1, 274.

Trappists.—A branch of the Cistercian order of Monks, governed by rules of great austerity. There are two monasteries of the order in the United States—in Kentucky and Iowa.

Trave.—An important river of Germany, flowing into the Baltic. Length, 70 miles, navigable in part for large vessels.

Traveling, 1, 81; 13, 241.
A good lunch, 1, 84.
Baggage, 1, 84.
Buying tickets, 1, 83.
abroad, 1, 86.
Checking trunks, 1, 82.
Clothing for foreign, 1, 86.
Consult "Baedeker," 1, 87.
Day-coach, 1, 83.
European travel, 1, 84.
Getting a room at a hotel, 1, 83.
Giving tips, 1, 83.
Hand luggage for foreign, 1, 86.
Meals during the trip, 1, 84.
Night journey, 1, 85.
Preparations for a journey, 1, 84.
Safety of modern, 1, 82.
Second-class on the Continent, 1, 87.
Secret of comfortable, 1, 83.
Sleeping car, 1, 85.

Traveling — Continued.

Stateroom on the steamer, 1, 86.

Tips on the steamer, 1, 86.

Women not good at, 1, 82.

Traveling Saleswomen, 7, 410.

Traverse Lake.—On the boundary between Minnesota and Dakota. Length, about 17 miles.

Treason, 12, 389.

Treasury Board, 11, 259.
department, 12, 395.
notes, 7, 460; 13, 165.
office of accounts, 12, 389.

Treatment of children's faults, 2, 236.

Treaty of Carlowitz, 10, 340.

Trebizond, or Trapezunt.—The second city in commercial importance in Asia Minor. It is situated on the Black Sea and is a trade center and steamship terminus. Pop., about 45,000.

Tree duck, 4, 110.
Largest in the world, 5, 8.
swallow, 4, 192.
Symbolism of, 2, 184.
that bears the largest leaves, 5, 9.

Trees and fruits, 4, 405.
An interesting habit of, 4, 389.

Trefoil design, 7, 286.

Trench, Richard Chenevix.—(1807-1866.) British philologist, theologian, poet, and divine.

Trent, Council of, 10, 298.

Trent Affair, The.—An episode of the Civil War that came near causing a breach of friendly relations, and probably war, between the U. S. and England; and which by reason of its international bearing attracted the attention of the whole civilized world. The insurrectionary government was extremely desirous of securing the recognition of the Confederate states by foreign powers, that it might have a standing among the nations, with all the political, commercial, and belligerent rights and privileges of a *de jure* as well as a *de facto* government. In England and in France, especially among the titled and the business classes, there was a strong feeling favorable to the Southern cause, and official recognition of the Confederacy was urged by many who were high in power. In England this sentiment was greatly augmented by the fact that the blockade of Southern American ports had cut off the supply of cotton for the great cloth manufactories, and hundreds of looms and thousands of spindles were idle. To take the largest advantage of these conditions and to endeavor to secure recognition, in the autumn of 1861 the Confederate government sent

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Trent Affair, The — Continued.

James M. Mason, of Va., and John Slidell, of La., as commissioners to England and France, respectively. They ran the blockade and went to Havana, Cuba, where they took passage for London on the British steamer "Trent." Their mission, and the fact that they were passengers on the "Trent," were matters of public knowledge. There was no attempt at concealment, for under the neutrality laws of civilized nations they could not rightfully be taken from a foreign vessel. On Nov. 8, in the old Bahama channel, the "Trent" was overhauled and brought to by the U. S. war steamer "San Jacinto," Capt. Charles Wilkes. It is scarcely possible that the latter could have been ignorant upon this point of international law, but in the belief that the end justified the means, he permitted his zeal and his loyalty to his flag to override his judgment. He sent an officer on board the "Trent" and demanded of its captain the surrender of Mason and Slidell. This was properly refused, but under threats of force, the Confederate commissioners, after a vigorous and emphatic protest, yielded themselves as prisoners. Mason and Slidell, with their secretaries and the friends who accompanied them, were taken on board the "San Jacinto" and carried to Boston, where the commissioners were placed in confinement in Fort Warren. The act of Capt. Wilkes created great excitement, not only in the U. S., North and South, but abroad as well. At the North for a time, Wilkes was the hero of the hour. Public meetings were held and much volcanic oratory was expended, in laudation of him. The multitude, thoughtless of the law and of the grave consequences of so flagrant a violation, looked only at the deed and filled the air with loud acclaim. Others, who condemned the act, admired Wilkes for his pluck. The British Government took instant and vigorous action, as the U. S. Government would have done had the conditions been reversed. The British minister at Washington was immediately directed to demand his passports and withdraw from the U. S., at the end of seven days, if within that time the U. S. Government did not release the prisoners and permit them to go upon their mission, and also make a suitable apology for its violation of the law of neutrality. President Lincoln and Secretary Seward were prompt to meet the emergency. Mason and Slidell were set free and sent to England, and an apologetic note was placed in the hands of the British minister, in which the act of Capt. Wilkes was disavowed, and regrets

for the untoward event were couched in courtly diplomatic phrase. While an adjustment of the matter was pending, there was no little apprehension at Washington and throughout the North, lest it should result in hostile relations with England — a condition which would probably have been fatal to the Union cause. But England accepted the American note, and there was a sensation of great relief and satisfaction at Washington and throughout the North, when the incident was thus happily closed. (See SEWARD, WILLIAM HENRY.)

Trenton.— The capital and an important manufacturing city of New Jersey. Pop., about 65,000.

Trenton, Battle of, 11, 133.

Treves.— A city of Prussia noted for its Roman antiquities.

Trial balance, 13, 47.

Triangles, 7, 250.

Equilateral, 7, 239.

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Triangulation, 13, 166.

Triassic rocks, 5, 465.

Tribulation, Derivation of, 8, 362.

Tribunes of the Plebs, 10, 211.

Triceps extensor cubiti, 1, 275.

Trichomes, 4, 393.

Tricolor of France, 10, 343.

Tricuspid valve, 1, 281.

Tridi, 13, 97.

Triest, or Trieste.— The principal seaport of Austria-Hungary. It is a commercial and manufacturing center. Pop., about 200,000.

Trifacial nerve, 1, 284.

Trifolium hyordium, 5, 63.

pratense, 5, 63.

repens, 5, 63.

Trillium, Large White, 5, 39.

Nodding, 5, 39.

Painted, 5, 39.

Trilobite, 5, 461.

Trinidad.— A large island of the British West Indies. It exports, besides the usual tropical products, an asphalt from the pitch lake, La Brea. This lake is about 1½ miles in circumference. The asphaltum near the shores is hard enough to sustain the weight of men and quadrupeds, but in the center it is in a boiling state. Trinidad is about 80 miles long. Pop., about 250,000.

Trinity Church, Boston, Mass., 8, 286.

Trinity College.— (1) The largest college of Cambridge University, England; founded in 1546 by Henry VIII. (2) A college of Oxford University; founded in 1554 by Sir Thomas

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- Pope. (3) (University of Dublin.) The leading educational institution in Ireland; founded by Queen Elizabeth in 1591.
- Triple Alliance.**—(1) A league between England, Sweden, and the Netherlands, established in 1668 and having for its object the suppression of French aggressions. (2) A league between France, Great Britain, and the Netherlands, formed in 1717, chiefly for defense against Spain; Austria joined this league in 1718. (3) A league between Germany, Austria-Hungary, and Italy, formed in 1882 for the purpose of checking Russia and France.
- Triplicate.**—To make three copies of a paper.
- Tripoli.**—(1) A vilayet of the Turkish empire, on the north coast of Africa. (2) The capital of Tripoli; a seaport and caravan station. Pop., from 20,000 to 30,000. (3) A town of Syria, Asiatic Turkey. It has trade and fishing industries, also silk manufactories. Pop., about 20,000.
- Tristram, The Story of**, 3, 436.
- Triticum sativum**, 5, 89.
- Triton**, 10, 99.
- Triumphs of Grit**, 14, 83.
- Trivikrama**, 10, 12.
- Trochee**, 8, 406.
- Trochlear nerve**, 1, 284.
- Trogon**, 4, 212.
- Trojan War**, 3, 367.
- Trolley-cars**, 5, 398.
- Trollope, Anthony.**—(1815-1882.) A celebrated English novelist, 14, 188.
- Trollope, Thomas Adolphus.**—(1810-1892.) An English novelist and miscellaneous writer; brother of Anthony Trollope.
- Trolls**, 10, 120.
- Tronville.**—A seaport and popular summer resort of France, situated on the Bay of the Seine.
- Troops, Negro**, 12, 344.
- Troppau, Congress of**, 10, 368.
- Trousseau**, 1, 49.
- Trout**, 4, 295.
 As a game fish, 4, 296.
 Brook, 4, 295.
 Colors of, 4, 295.
 fishing, 4, 296.
 Lake, 4, 295.
 Salmon, 4, 295.
 Speckled, 4, 295.
- Trowbridge, John Townsend.**—Born, 1827. A noted American author and editor.
- Troy.**—A city of New York, engaged largely in manufacturing. Pop. (1900), 60,651.
- Troy.**—See HOMER LEGEND, 3, 376.
- Troy weight**, 13, 149.
 Standard, 13, 220.
- Troyes, Treaty of**, 10, 267, 406.
- Trumbull, John**, 9, 330; 11, 64.
- Trumbull, Lyman**, 12, 389.
- Trumpeter swan**, 4, 111.
- Truncated pyramid**, 7, 253.
- Trunk, Exercises for the**, 6, 22.
- Trust-busting**, 12, 181.
- Trust Companies**, 7, 479.
- Trusts**, 13, 254.
 Legislation against, 12, 180.
- Truthfulness, Habit of**, 2, 460.
 Obligation to, 2, 221.
- Tsaon Pei**, 10, 151.
- Tschaikovsky, Peter Ilitch**, 9, 141.
- T-square**, 7, 260.
- Tsung-Ching**, 10, 159.
- Tuccia**, 10, 100.
- Tudor.**—An English dynasty established on the male side by Owen Tudor. Henry VII., Henry VIII., Edward VI., and Mary and Elizabeth belong to this dynasty, 10, 274, 300.
- Tufted puffin**, 4, 221.
- Tugs**, 5, 421.
- Tuileries.**—A former royal residence in Paris, commenced by Catherine de' Medici about 1564, and completed by Henry IV. and Louis XIV. The Tuileries was connected by wings with the Louvre; its garden, enlarged and beautified, now covers the site of the palace, which was burned by the Commune in 1871.
- Tula.**—The capital of the government of Tula in Russia; one of the principal manufacturing cities of Russia. Pop., about 70,000.
- Tulloch charges**, 12, 180.
- Tumbler pigeon**, 4, 112.
- Tung-Che**, 10, 162.
- Tunis.**—The capital and a seaport of the French protectorate of Tunis in northern Africa. An important center of commerce and manufacture. Pop., about 135,000.
 Control of, 11, 22.
- Tunison, Fannie**, 8, 29.
- Tunnel**, 5, 421.
 Arlberg, 5, 421.
 Hoosac, 5, 421.
 St. Gothard, 5, 421.
 Severn, 5, 421.
- Tunny**, 4, 288.
- Tupper, Sir Charles.**—Born, 1821. A noted Canadian conservative statesman.
- Tupper, Martin Farquhar.**—(1810-1889.) An English poet.
- Turanians**, 10, 48.
- Turbinated bones**, 1, 294.
- Turbot**, 4, 274.
- Turco-Russian War**, 11, 10.
- Turenne, Vicomte de (HENRI DE LA TOUR D'AUVERGNE).**—(1611-1675.) A celebrated French marshal.

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- Turgenieff, Ivan Sergeyevich.**—(1818-1883.)
A celebrated Russian novelist.
- Turgot, 10, 341.**
- Turin.**—The capital of the province of Turin, Italy. It is a flourishing city and rapidly growing in commercial importance. Pop., about 400,000.
- Turk, John C., 13, 439.**
- Turkestan.**—A region of Asia inclosed by Siberia, Persia, Afghanistan, and Tibet. Its boundary lines are indefinite, but it is generally understood to include the western portion of Central Asia.
- Turkey, The, 4, 107.**
buzzard, 4, 136.
Domestic, 4, 108.
Vulture, 4, 136.
Wild, 4, 107.
- Turkey, or The Ottoman Empire.**—An empire whose possessions lie in southeastern Europe, southwestern Asia, and the north of Africa. Its immediate possessions in Europe are the vilayets of Constantinople, Adrianople, Servia, Saloniki, Skutari, Monastir, Janina, Kosova, and Crete; in Africa, the vilayets of Tripoli and Bengazi; in Asia, Asia Minor, Armenia and Kurdistan, Mesopotamia, and Syria and Arabia. The country has an extensive export trade, the chief products being raisins, opium, fruits, coffee, oil, etc. Area of immediate possessions about 1,000,000 square miles. Pop., about 30,000,000, 10, 307.
- Turkey-red dye, 5, 249.**
- Turkish fables, 3, 179.**
rugs, 1, 34.
- Turkomans of Merv, 11, 26.**
- Turks at war with Venice, 10, 327.**
Capture Crete, 10, 327.
- Turner, Joseph Mallard William, 9, 262, 283, 337.**
- Turnip, 5, 78.**
Swedish, 5, 78.
- Turpie, David, 12, 390.**
- Turquoise, 1, 197.**
- Turtle, 4, 243.**
- Tuscany.**—A compartimento of Italy, corresponding closely to the ancient Etruria. Area, 9,304 square miles. Pop., nearly 3,000,000.
- Tussaud's, Madame, Waxworks.**—A waxwork exhibit in London; founded in 1802 by Madame Marie Grosholtz Tussaud. Some of the figures in the present collection were modeled by Madame Tussaud.
- Tutuila.**—An island of the Samoan group; the third in importance. Area, 55 sq. miles.
- Tver.**—Capital of the government of Tver, Russia. A city of trade and manufacturing interests. Pop., about 45,000.
- Twain, Mark.**—Pseudonym of Samuel Langhorne Clemens.
- Tweed.**—A river of Scotland, and on the boundary between England and Scotland. Length, about 97 miles, 14, 261.
- Tweed, William Marcy, 12, 390.**
- "Tweed Ring," 14, 296.**
- Twelfth Day, 13, 100.**
- Twentieth Century, 13, 104.**
- Twenty-cent piece, 13, 165.**
- Twickenham.**—In England, a town of Middlesex, on the Thames.
- Twin Flower, The, 5, 21.**
- Two Young Men and the Restaurant-keeper,**
Turkish fable, 3, 180.
- Twyers, 5, 218.**
- Tyburn.**—A tributary of the Thames which formerly flowed through London. A place of execution was established upon its banks near the present site of the Marble Arch in Hyde Park.
- Tycoon, 10, 170.**
- Tyler, John, 11, 294.**
Presidency of, 11, 298.
- Tyler, Wat.**—Killed at Smithfield, 1381. Leader of a peasant revolt in England, in 1381.
- Tyndale, or Tindale, William.**—Born about 1484; burned at the stake, 1536. An English reformer.
- Tyndall, John.**—(1820-1893.) A distinguished British physicist.
- Type, Smaller sizes of, 13, 157.**
- Typewriter, Inventor of, 5, 422.**
- Typewriting, Touch, 13, 222.**
- Typha latifolia, 5, 54.**
- Tyr, 10, 126.**
- Tyranny over children, 2, 214.**
- Tyrant, 10, 194.**
- Tyre.**—Next to Sidon, the most important town of ancient Phenicia. It was situated at the head of the Mediterranean Sea, on the coast of that portion of Asia Minor now known as the Levant. It played an important part in the trade of ancient times, and supplied the Roman world with linen fabrics dyed with the famous Tyrian purple derived from the shell of a fish. It was besieged by Alexander the Great for nine months. The modern Cur, a town of 5,000 inhabitants occupies the site of the ancient city, 10, 185.
Siege of, 10, 185.
- Tyrol, or Tirol.**—A county of Austria-Hungary. Capital, Innsbruck. It has extensive mining interests; chief products, wines, fruits, cheese, etc. Area, 10,287 sq. miles. Pop., nearly 1,000,000.

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Tyrrel, Sir Walter, 10, 257.

Tyrrhene Sea.—In ancient geography, that portion of the Mediterranean west of Italy.

Tyrtæus.—A lame schoolmaster who lived in Athens in the 7th century B. C. When the Spartans were at war with the Messenians, the former were told by the oracle to take a

leader from among the Athenians. The latter, not wishing to aid the Spartans, sent Tyrtæus whose songs so inspired the Spartan soldiers that they were victorious. Portions of his works remain.

Tyrta Yuga, 10, 12.

Tzu-Hszi, 10, 162.

U

Uaupés.—A river of South America, the largest tributary of the Rio Negro. Length, estimated about 700 miles.

Udaipur.—(1) A native state, a British protectorate in India. (2) The capital of the state of Udaipur. Pop., about 50,000.

Udall, Nicholas.—(1505-1556.) An English dramatist and Latin scholar.

Ufa.—The capital of the government of Ufa, in Russia. Pop., about 30,000. The region has iron and copper interests.

Uffizi.—A famous art gallery, situated in Florence, Italy; founded in the 15th century.

Uganda.—A protectorate of British east Africa, situated on Lake Victoria. Area, about 45,000 sq. miles. Pop., about 2,500,000.

Uhde, 9, 318.

Uhland, Ludwig.—(1787-1862.) A German lyric poet.

Uhr-she Hwang-te, 10, 151.

Ujiji.—(1) A country of Central Africa, inhabited by the Jiji tribe, a strong, industrious people, engaged in agriculture, fishing, iron manufactures, and trade. (2) The chief town of Wajiji in Central Africa.

Ukraine.—In Russia, a region of uncertain boundaries but lying chiefly in the valley of the middle Dnieper. Its possession was long disputed by Russia and Poland, but the latter country ceded to Russia, in 1667 and 1686, that part lying east of the Dnieper; the part west of the Dnieper became a Russian possession in 1793.

Uleaborg.—A seaport of Finland, capital of the laen of Uleaborg; engaged extensively in foreign trade. Pop., about 11,000.

Ulea Lake.—A lake of Finland; length, about 40 miles.

Ulfilas.—(311-381.) A Gothic bishop and translator of the Bible.

Ullswater, or Ulleswater.—A lake of England, lying between Cumberland and Westmoreland. It is the second in size of the English lakes. Length, 9 miles.

Ulm.—In Germany, the chief town of Würtemberg and an imperial fortress. An important manufacturing and railroad center. Pop., about 37,000.

Ulm, Capitulation of.—The surrender, Oct. 17, 1805, of an Austrian army to Napoleon. The Austrian forces numbered between 20,000 and 30,000 men.

Ulm, Truce of.—Concluded in 1647 between the Bavarians and the Franco-Swedish forces.

Ulmus alata, 4, 456.

Americana, 4, 455.

campestris, 4, 455.

fulva, 4, 456.

Montana, 4, 456.

racemosa, 4, 456.

Ulna, inner bone of the fore arm, 1, 274.

Ulster.—One of the four great divisions of Ireland. Pop., about 2,000,000.

Ulysses.—See STORY OF THE ODYSSEY, 3, 377.

Umbagog Lake.—Between Maine and New Hampshire, a lake having outlet into the Androscoggin River. Length, 9 miles.

Umbrella Tree, 5, 9.

Umbria.—Anciently, a region of Italy; now a compartimento of Italy, containing the province Perugia.

Una.—A character in Spenser's "Faerie Queene," the personification of truth. She is followed in her wanderings by a lion which has become tamed through her gentle influence.

Unaka Mountains.—A mountain range between Tennessee and North Carolina. A part of the Great Smoky Mountains.

Uncas, 11, 64.

Uncharitableness of children, 2, 195.

Unciform bone, 1, 274.

"Uncle Billy."—An affectionate sobriquet given to Gen. William T. Sherman by the soldiers of his army.

Uncle Remus.—See REMUS, UNCLE.

Uncle Sam, 12, 390.

Uncle Tom's Cabin, 11, 324.

"Uncommercial Traveller, The."—A collec-

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tion of sketches by Dickens, published serially in 1860.

Underwood, Francis Henry.—(1825-1894.) A noted American author; originator of the idea that resulted in the establishment of the "Atlantic Monthly." He held two consulships under President Cleveland.

Underwriter.—An insurer.

"Undine."—The title of a story by Fouqué, Baron de la Motte, published in 1811. Undine, a water sprite, through her marriage to a mortal, is endowed with a soul.

Ungava Bay.—An arm of Hudson Strait on the coast of Labrador.

Ungulata, or hoofed mammals, 4, 11.

Uniformity Act.—In English history. (1) An act of Parliament (1549) providing for uniformity of religious service. (2) An act of Parliament (May 19, 1662) obliging holders of church livings to be ordained by a bishop and regulating a number of other matters pertaining to the church.

Union, Act of.—(1) A statute by which Wales was united to England, enacted in 1535-36. (2) A statute (1706), uniting the Kingdoms of England and Scotland, on and after May 1, 1707. (3) A statute (1800) uniting Great Britain and Ireland on and after Jan. 1, 1801.

Union Jack.—The national ensign of the United Kingdom of Great Britain and Ireland when used in a small form at the end of the bowsprit, is called the Union Jack. It is never floated on shore; and the name should not be applied to the larger Union flag.

Union Pacific Railroad, 12, 348.

United States acquires Philippines, 11, 30.

Acquisition of territory, 12, 390.

An Oriental power, 11, 29.

Area of, 12, 391.

Army, 12, 191.

Capital of, 11, 220.

Center of area of, 12, 393.

population, 12, 393.

Departments of, 12, 395.

from Civil War to Present Day, 12, 155.

Geographer of, 12, 274.

Increase of population, 12, 393.

in the Philippines, 11, 30.

Naturalization laws of, 12, 340.

Navy of the, 12, 343.

Number of representatives, 12, 394.

Population of, 12, 392.

Univalves, 4, 369.

University of California, 8, 51.

University, Largest, in the World.—The University of Paris is the largest in the world, and has an attendance of 9,215 students,

Vienna coming next with 6,220 students. The University of Berlin is attended by 5,527 students, and has 335 instructors. France has 1 University student in every 865 of its population, Spain 1 in every 1,065, Belgium 1 in 1,406, Denmark 1 in 1,600, Switzerland 1 in 1,700, Germany 1 in 1,802, Sweden 1 in 1,860, Norway 1 in 1,950, Great Britain 1 in 2,150.

University, The One at which Most Women Have Matriculated.—The University of St. Andrews, Scotland, has admitted women since 1877, and 6,605 women have matriculated. Out of this number 1,223 have received the title and diploma of LL.A., or Lady Literature in Arts. In the matriculation list of the London University of July, 1893, it was shown that 270 women had been successful; one woman took the LL.B. degree, while four received that of M.D. Six women took the M.B. degree; twelve gained the B.Sc. degree; six took the much-coveted M.A. degree. The B.A. degree was in 1893 conferred on seventy-nine women. At Cambridge University women have been allowed to compete for degrees since October, 1863. At Oxford University, since April 29, 1884, women have been examined for honors, but in neither Oxford nor Cambridge can they proceed to graduation. Melbourne University was thrown open to women on March 22, 1880, while the Victoria University, at Manchester, opened its doors to women in 1883. At the University of Christiana women stand high on the honor lists. At Zurich University, in Switzerland, in 1893, 111 women students matriculated.

University Settlements.—A form of educational work among the poor suggested by the efforts of Edward Denison along this line in England. Its scheme necessitates the actual living among the poor of those who would further their interests; cultivated and refined people establish themselves in quarters in the so-called slum districts of the cities, and endeavor by example, and by more practical means, to inspire and uplift those whose lives have been less fortunate. Lecture courses are established, entertainments provided, and everything possible done to promote development of character. Among the most notable establishments engaged in this system of education are the College Settlement in New York, Hull House in Chicago, the Denison and Andover Houses in Boston, and the Philadelphia College Settlement.

Unpunctuality, Cause of, 2, 316.

Prompt dressing a cure of, 2, 317.

Treatment of, 2, 316.

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- Unter den Linden.**—A famous street of Berlin, 4, 423.
- Unterwalden.**—One of the Forest Cantons of Switzerland. Chief towns, Stanz and Sarnen. Pop., about 30,000.
- Upas Tree.**—A tree of the East Indies (*Antiaris toxicaria*) of the family *Artocarpaceæ*. It yields an acrid poison.
- Updegraaf, Prof. Milton,** on Astronomy, 5, 105.
- Upholstering,** 13, 424.
- Upland plover,** 4, 129.
- Upolu.**—One of the Samoan Islands, the second in size. It contains Apia, the principal town of the islands. Area, 350 sq. miles. Population, about 16,000.
- Upper Silurian epoch,** 5, 464.
- Upsala.**—The capital of the laen of Upsala in Sweden, noted for its university and its archbishopric.
- Ural Mountains.**—Mountains that lie between Europe and Asia, chiefly in Russia. They are rich in minerals and precious stones.
- Ural River.**—A river that rises in the Ural Mountains, in Russia, and flows south into the Caspian Sea. Length, about 1,000 miles; in part navigable for large vessels.
- Urania.**—In Greek mythology, the muse of astronomy and the celestial forces, 10, 92.
- Uranium,** 5, 222.
- Uranotocenia,** 4, 357.
- Uranus,** Discovery of, 5, 129.
- Uraschimataro,** Japanese fairy tale, 3, 20.
- Urban I.**—Bishop of Rome, 222-230.
- Urban II.** (UDO, or EUDES).—Pope 1088-99. He furthered the first Crusade.
- Urban III.** (UBERTO CRIVELLI).—Pope 1185-87.
- Urban IV.** (JACQUES PANTALÉON).—Pope 1261-64.
- Urban V.** (GUILLAUME DE GRIMOARD).—Pope 1362-70.
- Urban VI.** (BARTOLOMMEO PRIGNANI).—Pope 1378-89. The papal schism began in his reign.
- Urban VII.** (GIOVANNI BATTISTA CASTAGNA).—Pope for only 13 days, in 1590.
- Urban VIII.** (MAFFEO BARBERINI).—Pope 1623-44.
- Urbino.**—A city of Italy, the capital of the former duchy of Urbino, and in the 15th and 16th centuries a center of art and literature. The birthplace of Raphael.
- Uri.**—A Forest Canton of Switzerland, bounded in part by Lake Lucerne. Capital, Altorf. The scene of the conflicts between the French and the Prussians and Austrians in 1799. Pop., about 20,000.
- Urine,** a symptom in disease, 1, 319.
- Urquhart, or Urchard, Sir Thomas.**—(1605?-1660.) A Scottish Royalist and author; his most important work a translation of Rabelais.
- Ursa Major,** 5, 135.
- Ursa Minor,** 5, 137.
- Ursula.**—A legendary British saint and martyr, said to have been slain, with 11,000 virgins, by an army of Huns, near Cologne.
- Ursula Cotta,** 10, 290.
- Urtica dioica,** 5, 69.
- Urticaria, or hives,** 1, 337.
- Uruguay.**—A republic of South America lying south of Brazil, and bordering on the Atlantic Ocean. Cattle-raising is the chief occupation of the inhabitants, and animal products the chief exports. Capital, Montevideo. Area, 72,172 sq. miles. Pop., about 800,000.
- Uruguayana.**—A town of Brazil situated on the Uruguay River; an important trading point. Pop., about 6,000.
- Urus,** 4, 15.
- Usance,** 13, 255.
- Ushant.**—An island off the coast of France, containing the village St. Michel and belonging to the department of Finistère. Length, about 4½ miles. Pop., about 3,000.
- Ushant, Battle of.**—In 1778, a naval battle between the French under d'Orvilliers and the British under Keppel. It was fought near the island of Ushant, and resulted to the advantage of the French.
- Usher, or Ussher, James.**—(1580-1656.) A British prelate, theologian, and scholar. His most notable work, "Annales Veteris et Novi Testamenti," embodied a scheme of biblical chronology that was universally accepted until disproved by latter-day investigation.
- Uspallata Pass.**—Across the Andes, between Chile and the Argentine Republic; highest point about 12,000 feet above the sea. The Transandine Railroad runs through the Uspallata Pass.
- Usury,** 13, 255.
- Utah.**—One of the Western states of the United States of America. First settled by the Mormons, 1847-48; became a territory in 1850, and a state in 1896. Its surface is mountainous and the land abounds in silver and lead. Salt Lake City is the capital. Area, 84,970 square miles. Pop. (1900), 276,749.
- Utgard, Lake,** 10, 126.
- Utica.**—(1) A city and railroad center of New York. It is a manufacturing place and the leading cheese market of the country. Pop. (1900), 56,383. (2) An ancient city of Africa, lying a few miles from Carthage, which it supplanted as the principal city of Africa.
- "Utopia."**—The title of a political romance

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by Sir Thomas Moore, published in 1516. Utopia was an imaginary island upon which was established an ideal commonwealth.

Utrecht.—The capital of the province of Utrecht, Netherlands. It is a railway center and has manufacturing interests. Pop. between 90,000 and 100,000.

Utrecht, Peace of.—Concluded in 1713 between France on one side and Great Britain, Prussia, Savoy, Holland, and Portugal on the other. Spain agreed to its provisions and it was largely influential in ending the war of the Spanish Succession. Its object was the adjustment of various vexed questions as to the rights and possessions of the countries involved, 10, 340.

Utrecht, Union of.—Concluded in 1579. Unit- ing Holland, Utrecht, Zealand, Gelderland, Overijssel, Groningen, and Friesland, as the Dutch Republic, 10, 299.

Uxbridge.—In England, a town of Middlesex County, a few miles from London. Here were conducted, in 1645, the unsuccessful ne- gotiations between the Parliamentary and Royalist commissioners.

Uxmal.—In Yucatan, Mexico, a ruined city, of which but few of the walls are now stand- ing. Its origin is unknown, but it was doubt- less built by a Maya people. It is thought that some of the temples of Uxmal were in use by the Indians as late as the 17th cen- tury.

V

Vaccination.—The inoculation with the virus of smallpox for the purpose of producing im- munity from the severity of that disease by inducing a mild type which is controlled by the refinement of the virus.

Vacuoli, 4, 391.

Vadimonian Lake.—Anciently a lake of Italy; the modern Laghetto di Bassano. The scene of two Roman victories—the first about 310 B. C. over the Etruscans, the second 283 B. C. over the combined Gauls and northern Ital- ians.

Vaishnavas, 10, 11.

Valais.—A canton of Switzerland; capital, Sion.

Valdai Hills.—The most elevated region of central Russia; a group of hills forming a watershed between the streams that empty into the Baltic and those forming the source of the Volga.

Valdivia.—The capital of the province of Val- divia, Chile. Founded as a fort in 1552 by Pedro de Valdivia.

Valence.—In France, capital of the department of Drôme; an important commercial and manufacturing city. Pop., about 25,000.

Valence of chemical elements, 5, 183.

Valencia.—(1) A Moorish kingdom in Spain, comprising the provinces of Valencia, Castel- lon, and Alicante. (2) A province of Spain, the chief city of which is Valencia, an impor- tant commercial and manufacturing center. (3) One of the leading cities of Spain. (4) A city of Venezuela, South America.

Valenciennes.—In France, a fortified city of

the department of Nord; an important manu- facturing center, long noted for its laces. Pop., about 30,000.

Valentine, Saint.—A Christian martyr (about 270). His festival was celebrated for a time on Feb. 14, but the custom of sending valen- tines on this date has no direct connection with St. Valentine.

Valentine's Day, Saint.—The 14th of Feb. The feast day of St. Valentine, a Christian martyr, who was executed in Rome 270 A. D. The custom of sending love messages or val- entines on this day has no direct connection with the feast of the Saint, but is of very an- cient origin. The 15th of Feb. was espe- cially observed by the Romans during the cele- bration of the Lupercalia, which covered a period during the middle of the month.

Valentinian I.—(About 321-375.) A Roman officer proclaimed emperor by the army, 364, 10, 232.

Valentinian II.—(About 371-392.) Son of Valentinian I. Associate emperor of the West with Gratian, his half-brother, 375. Met death by assassination at the hands of his general, Arbogast.

Valentinian III.—(419-455.) Son of Constan- tius and Placidia; made emperor of the West, 425, 10, 259.

Valentinus.—Died about 160 A. D. One of the principal Gnostic teachers.

Valerian, 10, 231, 400.

Val-es-Dunes.—A plain of Normandy near Caen; the scene of the defeat (1047) of the Norman rebels by William, Duke of Nor- mandy (William the Conqueror).

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- Valhalla** (Hall of the Slain).—In Norse mythology, the abode of Odin in Asgard, 10, 119.
- Valid**.—Of force; binding.
- Valkyrs**.—In Norse mythology, the hand-maidens of Odin, 10, 119.
- Valladolid**.—In Spain, the capital of the province of Valladolid; the home of Cervantes. Pop., about 65,000.
- Vallejo**.—A town of California, situated on the Bay of San Francisco. It has a fine harbor and an extensive grain trade, also ship yards and manufacturing interests. Pop., about 8,500.
- Valley Forge**, 11, 133.
- Valley of Poison**, Java, 14, 309.
- Vallombrosa**.—A famous abbey near Florence, Italy; founded by Gualbert, about 1038.
- Vallus**, 10, 232.
- Valmiki**, writer of the Ramayana, 3, 320.
- Valmy, Battle of**, 10, 345.
- Valois**.—An ancient government of France, comprised in the modern departments of Oise and Aisne. Its chief town was Crespy.
- Valparaiso**.—A seaport and the capital of the province of Valparaiso, Chile. It is an important commercial center and the principal seaport of the Pacific coast of South America. Pop., about 150,000.
- Value of ideas**, 8, 204.
received, 13, 50.
- Vamana**, 10, 12.
- Van Buren, Martin**.—Eighth President; sketch of, 11, 284.
- Vance, Zebulon Baird**.—(1830-1894.) A prominent American politician.
- Van Cortlandt, Oloff Stevense**, 11, 64.
- Van Cortlandt, Pierre**, 11, 65.
- Van Cortlandt, Stephanus**, 11, 65.
- Vancouver**.—A seaport of British Columbia; the terminus of the Canadian Pacific Railway. Pop., about 15,000.
- Vancouver, George**, 11, 65.
- Vancouver Island**.—An island west of British Columbia, to which it belongs. Capital, Victoria. Area, 15,937 sq. miles. Pop., about 40,000.
- Vandalia**.—A small city of Illinois, formerly the state capital. Pop. (1900), 2,665.
- Vandals**.—A Teutonic race who first appeared in central and southern Europe in the 5th century. Thence, they spread west and ravaged Gaul, Spain and the northern coast of Africa. In 455 they invaded Rome and indulged in wanton destruction, whence the word *Vandalism*. It is said that the Spanish province of Andalusia took its name from a corruption of Vandalusia, 10, 233.
- Vandamme, Dominique Joseph**.—(1770-1830.) A noted French general, 14, 362.
- Vanderbilt, Cornelius**, 1, 242; 14, 91.
- Van Der Stucken, Frank**.—Born, 1858. An American musical conductor and composer.
- Van de Velde, Willem**, the younger.—Dutch painter, 9, 316.
- Van Diemen's Land**.—The former name of Tasmania.
- Vandimonian, Lake, Battle of**, 10, 214.
- Van Dyck, Anthony**, 9, 294, 306, 326.
- Vane, Sir Henry**, 11, 65.
- Van Eyck, Hubert**, 9, 289.
- Van Eyck, Jan**, 9, 289.
- "Vanity Fair."**—A famous novel by Thackeray.
- Vannes**.—A city of France, capital of the department of Morbihan. Formerly a residence of the dukes of Brittany. Pop., 25,000.
- Van Ostade, Adrian Jansz**.—Dutch painter, 9, 308.
- Van Rensselaer, Killian**.—(1595-1644.) A Dutch trader, one of the first settlers in New York.
- Van Rensselaer, Solomon**, 11, 133.
- Van Rensselaer, Stephen**, 11, 133.
- Van Ruisdael, Jacob**, 9, 312.
- Vans, The** (Norse Mythology), 10, 127.
- Vansittart Island**.—An island in the Arctic regions of North America, 1, 223.
- Van Twiller, Wouter**.—(1580-1646.) Dutch governor of New Netherlands, 1633-37.
- Var**.—A river of France, flowing into the Mediterranean. Length, about 80 miles.
- Var**.—A department of France, bordering on the Mediterranean. Capital, Draguignan. Chief city, Toulon. Pop., about 300,000.
- Varaha**, 10, 10.
- Varanger Fjord, or Waranger Fjord**.—An arm of the Arctic Ocean extending into northern Norway and Russia. Length, about 60-70 miles.
- Varden, Dolly**.—One of the principal characters in Dickens's "Barnaby Rudge."
- Varicella, Treatment of**, 1, 346.
- Varin, Quentin**, 9, 262.
- Varley, Cornelius**.—(1781-1873.) An English water-colorist; brother of John Varley.
- Varley, John**.—(1778-1842.) A noted English landscape painter.
- Varro, Marcus Terentius**.—(116-27 B. C.) A famous Roman scholar and writer.
- Varus, Publius Quintilius**.—Died, 9 A. D. A Roman general, who took his own life after his defeat by Arminius, at the battle of Teutoburgerwald.
- Vasari**.—Italian painter and writer, 9, 252, 253, 372.

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- Vasco da Gama**, 10, 278, 300.
- Vascular plants**, 4, 392.
- Vasey, George**.—Born, 1822. A noted American botanist; the author of a number of botanical works. Served as botanist in the Department of Agriculture at Washington, 1872-93.
- Vasoky**, 10, 10.
- Vaso motor nerves**, 1, 284.
- Vastus externus muscle**, 1, 276.
- Vatican**.—A hill of Rome, on which stands the Vatican Palace and St. Peter's.
- Vatican Palace**.—In Rome, the chief residence of the Pope, and the seat of the famous library, museums, and art collections.
- Vauban, Sébastien Le Prestre de**.—(1633-1707.) A celebrated French military engineer and marshal.
- Vaucluse**.—In France, a village of the department of Vaucluse, celebrated as the home of Petrarch, and also for the fountain of Vaucluse.
- Vaud**.—A canton of Switzerland, lying east of France. Capital, Lausanne.
- Vaudreuil (Philippe de Rigaude), Marquis De**, 11, 65.
- Vaughan, Herbert**.—Born, 1832. An English Roman Catholic prelate; the head of the Roman Catholic Church in England, and an active worker against intemperance and in the rescue of children.
- Vauthier, Moreau**, 9, 402.
- Vaux, Calvert**.—(1824-1895.) A noted Anglo-American landscape architect. Landscape-architect for the department of public works in New York City.
- Vauxhall Gardens**.—A famous fashionable resort of London, established about 1660.
- Ve-Adar**, 13, 102.
- Vecchio, Palma**, 9, 250.
- Vedas, Theft of the**, 10, 9.
- Vedder, Elihu**.—Born, 1836. American painter, 9, 333.
- Veery, The**.—See THRUSH, 4, 161.
- Vega Carpio, Lope Felix de**.—(1562-1635.) A celebrated Spanish dramatist and poet.
- Veile**.—The capital of the amt of Veile, in Denmark. Pop., about 10,000.
- Veins**, 1, 281.
- Veit, Philipp**.—(1793-1877.) A distinguished German painter.
- Velasquez, Diego**, 11, 37.
- Velasquez, Diego de Silva y**, 9, 255.
- Velvet carpet**, 1, 33.
Painting on, 1, 225.
plant, American, 5, 17.
- Venable, Charles Scott**.—Born, 1827. An American educator; the author of a series of mathematical text-books.
- Vendée**.—A department of France; capital, La Roche-sur-Yon; the center of the Royalist outbreak in the Revolution.
- Vendee**, 13, 259.
- Vendemaire**, 13, 97.
- Vendome, Columin**.—In Paris, erected by Napoleon in honor of the Grand Army, 1806-10. Destroyed by the Commune, 1871, but replaced in 1875.
- Vendor**, 13, 259.
- Venetia**.—An ancient province of Italy, comprising the present provinces of Venice, Padua, Verona, Rovigo, Vicenza, Treviso, Belluno, and Udine. Pop., over 3,000,000.
- Venetian Alps**.—A group of the Alps lying in northern Italy.
- Venetian wars with Turkey**, 10, 327.
- Venezuela**.—A federal republic of South America, bordering on the Caribbean Sea. Capital, Caracas. The chief industries are agriculture, cattle-raising, and mining. The most important exports, coffee and cacao. Pop., about 3,000,000.
dispute with England, 12, 168, 234.
message, 12, 400.
- Venice**.—In Italy, a seaport and capital of the province of Venice; built upon a number of small islands in a bay of the Adriatic Sea. The islands are separated by canals and connected by bridges. Venice has important manufacturing industries, notably those of glass, gold, and silver, and textile fabrics. It is famous for its unique situation and for its palaces, works of art, etc. Pop., about 200,000, 10, 236.
Decline of, 10, 278.
Government of, 10, 277.
Rise of, 10, 277.
- Venison**, 4, 30.
- Ventose**, 13, 97.
- Ventricles of the heart**, 1, 280.
- Venus**, 10, 94.
of Melos, 9, 350.
- Venus, Mountain of, or Venusberg**.—The Hörselberg, between Eisenach and Gotha, Germany. According to medieval story, it was here that Venus held her court; Tannhäuser was the only one who ever returned from a visit to her abode.
- Venus of Medici**.—In the Uffizi Gallery, at Florence, a Greek statue, thought to be of the period of Augustus.
- Venus of Melos**.—In the Louvre, at Paris, a famous Greek statue, found, in 1820, in the island of Melos, 9, 350.
- Vera Cruz**.—(1) A state of Mexico, bordering on the Gulf of Mexico. Capital, Jalapa. (2)

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- The most important seaport of Mexico; founded by Cortés. Pop., about 20,000.
- Veragua** (DON CRISTOBAL COLON DE TOLEDO DE LA CERDA Y GANTE), **Duke of**.—Thirteenth in descent of the dukes of Veragua, who inherited the honors of Columbus. The present duke is a descendant of Francesco, the sister of Diego Columbus, great grandson of Columbus, with whom the male line of the family became extinct.
- Verb**, 8, 487.
- Verboeckhoven, Eugène Joseph**.—(1799-1881.) A distinguished Belgian painter of animals. His pictures command very high prices.
- Verdi, Fortunio Guiseppe Francesco**, 9, 141.
- Verdigris**.—A green accretion of an oxide of copper which is formed as a rust upon surfaces of that métal. It is highly poisonous and fatal effects have followed upon the use of imperfectly cleansed copper vessels as cooking utensils.
- Verdigris River**.—A river of Indian Territory and Kansas, flowing into the Arkansas River. Length, about 250 miles.
- Verdun, Treaty of**, 10, 242.
- Vereshchagin, Vasili**.—Born, 1848. A distinguished Russian painter, 9, 328.
- Vergil, or Virgil** (PUBLIUS VERGILIUS MARO).—(70-19 B. C.) A famous Roman poet. The first printed edition of Vergil was issued at Rome about 1469.
- Verlaine, Paul**.—(1844-1896.) A noted French poet.
- Vermejo, Bartolomeo**, 9, 254.
- Vermejo Rio**.—A tributary of the Paraguay in South America. Length, about 800 miles.
- Vermilion Bay**.—An inlet of the Gulf of Mexico, on the southern coast of Louisiana. Length, about 20 miles.
- Vermilion flycatcher**, 4, 199.
- Vermin, To remove**, 1, 302.
- Vermont**.—One of the New England states of the United States. Capital, Montpelier. It is an agricultural state, and is noted for its granite and marble quarries. One of the thirteen original states. Pop. (1900), 343,641.
- Vernal equinox**, 5, 112.
- Verne, Jules**.—(1828-1905.) A noted French novelist.
- Vernet, Antoine Charles Horace**.—French painter, 9, 266.
- Vernet, Claude Joseph**.—French painter, 9, 265.
- Vernet, Emile Jean Horace**.—(1789-1863.) A distinguished French painter, son of A. C. H. Vernet.
- Vernon-Harcourt, Leveson Francis**.—Born, 1839. A distinguished English engineer; the author of several works on engineering.
- Verrocchio, Andrea del**.—Noted Italian sculptor, 9, 375.
- Verona**.—In Italy, capital of the province of Verona. A fortified city, celebrated for its antiquities; the birthplace of Cornelius Nepos, the Elder Pliny, and Catullus. Pop., about 70,000, 10, 369.
- Veronese, Paul**.—Italian painter, 9, 250.
- Versailles**.—In France, capital of the department of Seine-et-Oise. Contains a famous royal palace; was the seat of the French government 1871-79. Pop., about 52,000.
- Vertebrae**, 1, 273.
- Vertebrata**, 4, 10.
- Vespasian**, 10, 227.
- Vesper Sparrow**, 4, 184.
- Vespucci, Amerigo**.—(1452-1512.) An Italian navigator and explorer who, it is said was the first to visit the coast of the western continent. The continent was named after him and an honor thus conferred which is based upon very doubtful, if not erroneous, statements of fact, 11, 36, 65.
- Vesta**.—See GREEK AND ROMAN MYTHOLOGY, 10, 99.
- Vestalia**, 10, 100.
- Vestal Virgins**, 10, 100.
- Vest, George Graham**, 12, 400.
- Vesuvius, Battle of**.—A Roman victory over the Latin League, gained near Mount Vesuvius about 340 B. C., 10, 213.
- Vesuvius, Mount**.—The world's most famous volcano; situated on the Bay of Naples, Italy. Its first recorded eruption took place in 79, A. D., destroying Pompeii, Herculaneum, and Stabiae. It is the only active volcano in Europe.
- Vetch**, 5, 64.
- Veto in Switzerland**, 10, 388.
Message, 12, 334.
- Veturia**, 10, 394.
- Vevey, or Vevay**.—In Switzerland, a town and favorite tourists' resort in the canton of Vaud.
- Via Aurelia**.—One of the famous Roman highways. Built in the 5th century and extending from Rome to Pisa and thence to the Maritime Alps. It was continued by Augustus to Gaul. There are considerable remains of the road now in existence.
- Viau, Théophile de**.—(1590-1626.) A French poet; author of the tragedy "Pyrame et Thisbé."
- Viaud, Louis Marie Julien** (pseudonym PIERRE LOTI).—Born, 1850. A noted French novelist.

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- Vibert, Jehan Georges.**—Born, 1840. A noted French painter and writer.
- Viborg.**—A seaport of Finland, and capital of the laen of Viborg. It has an extensive lumber industry. Pop., about 22,000.
- Viborg.**—A town of Jutland, in Denmark. It has an interesting cathedral of the 12th century. Pop., about 9,000.
- "Vicar of Wakefield, The."**—A famous novel by Oliver Goldsmith. Published, 1766.
- Vice-admiral, 12, 400.**
- Vichy.**—In France, a town and watering-place in the department of Allier. Celebrated for its mineral springs. Pop., about 10,000.
- Vicksburg.**—A city of Mississippi, on the Mississippi River. The largest city of the state, and an important manufacturing place; also engaged in the export of cotton. Prominent as a strategic point during the Civil War. Pop. (1900), 14,834.
- Vicksburg, Capture of.**—See GRANT.
- Victor Emanuel, or Emmanuel II.** of Sardinia and Victor Emmanuel I., of Italy (1820-1878). He succeeded to the throne of Sardinia in 1849 upon the abdication of his father. In 1861 he assumed the title of "King of Italy" and was successful in consolidating the kingdom 1870. See CAVOUR, 10, 466; 11, 2, 3.
- Victoria.**—(1) A British colony in Australia. Capital, Melbourne. Chief industries, gold-mining and sheep-raising. Area, 87,844 square miles. Pop., about 1,200,000. (2) The capital of British Columbia, situated on Vancouver Island. (3) A seaport of Brazil.
- Victoria Cross.**—A British decoration for distinguished bravery on the part of soldiers or sailors during service. Instituted, 1856. The cross is of bronze and made in the Maltese form. A figure of a crown surmounted by a lion adorns the center; beneath is a scroll bearing the words "for valour." A red ribbon suspends the cross presented to a soldier, a blue ribbon that given to a sailor. When presented to non-commissioned officers or men, the cross is accompanied by a small pension.
- Victoria Falls.**—A cataract of the Zambesi River in Africa; one of the world's greatest waterfalls. Height, 360 feet; width, 1,000 yards.
- Victoria, Queen, 10, 445; 14, 151, 359.**
- Victoria Land.**—The name of Arctic and Antarctic regions.
- Victoria Nyanza.**—A great lake of Africa, crossed by the equator; discovered in 1858 by Speke. Area, about 30,000 sq. miles.
- Victoria regia, 5, 41.**
- Victoria Strait.**—A strait of the Arctic regions, separating King William Island and Victoria Land.
- Victor-Perrin, Claude, DUKE OF BELLUNO.**—(1764-1841.) A distinguished French marshal.
- Victory, Winged.**—Famous Greek statue, 9, 350.
- Vicuña, The.**—See LLAMA, 4, 93.
- Vidal, Pierre.**—(1175-1215?) A Provençal troubadour, possessed of rare talent but somewhat unbalanced mentality.
- Vidar** (Norse Mythology), 10, 126.
- Vidocq, François Eugène.**—(1775-1857.) A noted French detective and adventurer.
- Vienna.**—The capital of the Austro-Hungarian monarchy, of the Cisleithan division of the empire, and of Lower Austria; the residence of the king. It is the most important commercial and manufacturing city of the country. Pop., about 1,500,000.
- Battle of, 10, 306.
- Vienna, Congress of.**—Held at Vienna, Sept. 1814-June, 1815. A meeting of the chief European powers for the purpose of adjusting the affairs of Europe, 10, 355.
- Vienne.**—(1) In France an important manufacturing city in the department of Isère. It contains a fine cathedral and the Roman temple of Augustus and Livia. (2) A department of France; capital, Poitiers.
- Vierge, Daniel.**—A noted contemporary Spanish-French artist and book illustrator.
- Vieuxtemps** (*vye-ton'*), **Henri.**—(1820-1881.) A celebrated Belgian violinist and composer.
- "Vigilant."**—The center-board sloop chosen to defend the America's cup against the "Valkyrie." Won three races, 1893. Was unsuccessful in the racing season of Great Britain, 1894.
- Vikings.**—Pirate bands of Northmen, who flourished in the 8th, 9th, and 10th centuries, and infested the coasts of France and the British Isles.
- Vilagos, Battle of, 10, 378.**
- Vilas, William Freeman, 12, 400.**
- Villard, Henry.**—(1835-1900.) A prominent American financier. He gave generously of his wealth to various educational institutions.
- Villars, Duc de** (CLAUDE LOUIS HECTOR).—(1653-1734.) A distinguished French marshal.
- Villemain, Abel François.**—(1790-1870.) A noted French writer.
- Villi, 1, 278.**
- Villiers, Charles Pelham.**—(1802-1898.) An English statesman, known as the "Father of the House of Commons."
- Villiers, Frederic.**—Born in London, 1850. A noted war correspondent and artist.
- Villiers, George, Duke of Buckingham, 10, 319.**

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- Vimeure, Donatien Mario Joseph de.** — (1750-1813.) French general, son of the Comte de Rochambeau.
- Vimeure, Jean Baptiste Donatien de,** Comte de Rochambeau. — Died, 1807; a noted French marshal.
- Vincennes.** — In France, a town in the department of Seine. Noted for its medieval castle, now used as an armory and artillery station.
- Vincennes.** — An important railroad center of Indiana. Pop. (1900), 10,249.
- Vinci, Leonardo da.** — Famous Italian painter, 9, 236.
- Vindhya Mountains.** — In Central India, a group of mountain ranges and hills, forming the northern boundary of Deccan.
- Vinegar,** 5, 231.
tree, 4, 433.
- Vineyard Sound.** — A channel between Martha's Vineyard and the Elizabeth Islands, off the coast of Massachusetts. Length, about 20 miles; width, 6 miles.
- Violet, The,** 5, 21.
Dog, 5, 21.
Dog's-tooth, 5, 42.
National flower of ancient Greece, 1, 201.
- Viper and the File,** Latin fable, 3, 176.
- Virchow, Rudolf.** — Born, 1821. A celebrated German anatomist, physiologist, and anthropologist; founder of cellular pathology, 14, 244.
- Vireo, The,** 4, 167.
- Virginia.** — One of the South Atlantic States of the United States of America. Capital, Richmond. It is chiefly an agricultural state, being second in the Union in the production of tobacco. It also has extensive mineral products, and varied manufacturing interests. Virginia was one of the thirteen original states, and holds a prominent place in the colonial history of the country. Pop. (1900), 1,854,184.
Army of Northern, 12, 99.
Assigned to Lords Arlington and Culpeper, 11, 43.
Dynasty, 11, 267.
- Virginia City.** — The largest and most important city of Nevada. Pop., about 10,000.
- Virginia Dare,** 11, 40.
- Virginia deer,** 4, 27.
nightingale, 4, 187.
rail, 4, 130.
- Virgin Islands.** — A group of islands in the West Indies, belonging to Great Britain, Denmark, and Spain. Discovered by Columbus, 1493. Area, about 275 sq. miles.
- Virgin's bower,** 5, 56.
Sabot, 5, 27.
- Virgo,** 5, 143.
- Virtue, Artificial,** 2, 426.
- Vischer, Peter.** — German sculptor, 9, 392.
- Vishnu.** — Hindu divinity, 10, 8, 9.
- Visigoths.** — The West Goths; one of the great historical divisions of the Goths, 10, 233.
- Visiting Cards,** 1, 60.
- Vistula.** — A large river of northern Europe. Length, about 650 miles. Navigable in part.
- Vitellius,** 10, 227.
- Vitoria, or Vittoria.** — An important commercial and manufacturing town of Spain.
- Vitzmau.** — A village of Lucerne, Switzerland. It is situated on the Lake of Lucerne and is a popular objective point for tourists.
- Vizagapatam.** — A seaport and the capital of the district of Vizagapatam in Madras, British India. It is situated on the Bay of Bengal. Pop., about 35,000.
- "Vizcaya," The,** 12, 400.
- Vladikavkaz.** — The capital and an important commercial center of Terek, Caucasia, Russia. It is also a railroad terminus, and a fortress. Pop., about 45,000.
- Vladimir.** — The capital of the government of Vladimir, Russia. It contains two interesting ancient cathedrals.
- Vladivostok.** — A seaport of Russia; the chief Russian naval station on the Pacific coast. Founding of, 11, 27.
- Vocal Cords,** 1, 292.
inflections, 8, 452.
- Vogt, Karl.** — (1817-1895.) A distinguished German naturalist.
- Vogüé, Eugène Marie Melchoir, Vicomte de.** — Born, 1848. A distinguished French writer and diplomatist.
- Voice** for speaking, To cultivate the, 8, 450.
Development of a child's, 9, 15.
- Void,** 13, 259.
- Vokes, Rosina.** — (1858-1894.) A noted English actress, popular in the United States.
- Volapük.** — An international language, originated by Johann Martin Schleyer, and published in 1879. Although it has not been adopted for common usage, Volapük has adherents in various parts of the world who are constantly striving to further its adoption. A number of text-books in Volapük have been prepared and periodicals devoted to its interests are published in Vienna, Munich, Paris, Madrid, Breslau, Turin, Milan, Antwerp, London, Boston, and several other places.
- Volcanic action,** Causes of, 5, 426.
rocks, 5, 460.
- Volcanoes,** 5, 424.
Eruptions of noted, 5, 425.
- Volga.** — A great river of Russia and the longest river of Europe. It flows into the Caspian

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- Sea. Length, about 2,400 miles, for the most part navigable.
- Volhynia.**—A government of Russia; capital, Zhitomir. Pop., about 2,500,000.
- Volkman, Friedrich Robert.**—(1815-1883.) A noted German-Hungarian composer.
- Volney, Comte Constantin François de Chassebœuf de.**—(1757-1820.) An eminent French scholar and author. He was made a count by Napoleon, and a peer by Louis XVIII.
- Vologda.**—The capital of the government of Vologda, in Russia. An important commercial center. Pop., about 20,000.
- Volscian Mountains.**—A group of mountains in Italy; highest point, about 5,000 feet.
- Volt, 5, 420.**
- Voltaire** adopted name of **François Marie Arouet.**—(1694-1778.) A celebrated French writer, 8, 145.
- Volto, Count Alessandro.**—(1745-1827.) A celebrated Italian physicist, especially noted for his researches and inventions in electricity.
- Volume of Sound, How It Is Measured.**—Sound arises from vibrations giving a wave-like motion to the surrounding atmosphere, the wave gradually enlarging as it leaves the source of disturbance, while at the same time the motion of the air particles becomes less and less. The simplest method of determining the number of vibrations of a sound is by means of Savart's apparatus. This consists of two wheels—a toothed or cog-wheel and a driving-wheel. They are so adjusted that the cog-wheel is made to revolve with great rapidity, its teeth hitting upon a card fixed near it. The number of revolutions is indicated by a counter attached to the axis of the cog-wheel. Suppose that sound is traveling in the air at the rate of 1,000 feet per second, and that Savart's wheel is giving a sound produced by 200 taps on the card per second, it follows that in 1,000 ft. there will be 200 waves or vibrations, and if there be 200 waves in 1,000 ft. each wave or vibration must be 5 ft. in length. The velocity of sound through air varies with the temperature of the latter, but is usually reckoned at 1,130 ft. per second.
- Volumnia, 10, 394.**
- "Volunteer."**—The sloop-defender of the America's cup against the "Thistle," a Scotch challenging cutter in 1887. Her dimensions were: length, over all 106.23 ft.; length, load-water line, 88.88 ft.; draught, 10 ft.; displacement, 130 tons. She was built by Edward Buyess for Gen. J. C. Paine, of Boston. After the race she was remodeled as a schooner and named the "Phenix."
- Vomiting, Treatment of, 1, 332.**
- Vondel, Joost van den.**—(1587-1679.) A celebrated Dutch dramatist and poet. The dramatic poem "Lucifer" is considered the greatest of his works.
- Von Kettler, Baron, 10, 163.**
- Von Moltke, 14, 37, 124.**
- Voorhees, Daniel Wolsey.**—Born, 1827. A prominent American politician.
- Voronezh.**—The capital of the government of Voronezh, in Russia. An important commercial center. Pop., about 60,000.
- Vosges.**—A department of France; capital, Epinal. It has manufactures of iron, cotton, etc., and extensive forests. Pop., about 40,000.
- Vosges.**—A mountain range of France and Germany, forming a part of the boundary between these countries.
- Voter, "Challenging" a, 12, 431.**
Citizen and, 12, 426.
Qualifications of a, 12, 429.
- Voting, Counting the votes, 12, 435.**
Manner of, 12, 431.
Receiving the votes, 12, 435.
"Repeaters," 12, 430.
"Tickets," 12, 432.
- Voting list, Revising the, 12, 430.**
- Vouet, Laurent, 9, 261.**
- Vouet, Simon, 9, 261.**
- Vowel sounds first made by a child, 2, 107.**
- Vreeland, H. H., 13, 68; 14, 44, 53, 333.**
- Vulcan.**—See GREEK AND ROMAN MYTHOLOGY, 10, 96.
- Vulcanizing rubber, 5, 192.**
- Vulcan Pass.**—A pass of the Carpathians, between Rumania and Transylvania.
- Vulgate.**—The Latin version of the Scriptures, prepared by Jerome at the close of the 4th century, and adopted as the authorized version of the Roman Catholic Church.
- Vulture, The, 4, 136.**
California, 4, 138.
Turkey, 4, 136.
- Vyatka, or Viatka.**—(1) A government of Russia, having a population of over 3,000,000. (2) The capital of the government of Vyatka. Pop., about 30,000.

W

- Wabash.**— (1) A city of Indiana. Pop. (1900), 8,618. (2) A river of Ohio and Indiana, flowing into the Ohio. Length, about 550 miles.
- Wacht am Rhein** ("The Watch on the Rhine"). — A German national song.
- Waco.**— A city of Texas; it has varied manufacturing interests. Pop. (1900), 20,686.
- Waddell, James Iredell.**— (1824-1886.) An American naval officer.
- Waddington, William Henry.**— (1826-1894.) French statesman and archæologist.
- Wade, Benjamin Franklin.**— (1800-1878.) An American lawyer and statesman. He was the acting Vice-president under Johnson.
- Wade, Decius S.,** 12, 400.
- Wade, James Franklin.**— Born, 1843. An American soldier; distinguished for gallant service in the Civil War.
- Wade, W. W.,** 2, 374.
- Wadsworth, James Samuel.**— (1807-1864.) An American general in the Civil War who was mortally wounded in the battle of the Wilderness, May 6, 1864.
- Wages, Change in,** 13, 346.
Easily calculated, 13, 260.
- Wagner, Alexander.**— Born, 1838. A noted Hungarian painter.
- Wagner, Frau Cosima,** 1, 239.
- Wagner, Wilhelm Richard,** 9, 143.
- Wagram.**— An Austrian village nine miles from Vienna. On July 5-6, 1809, Napoleon with 150,000 troops, defeated the Austrians under Archduke Charles with 120,000 soldiers. Loss on each side, about 25,000.
- Wahoo,** 4, 456.
- Wainscoting,** 1, 17.
- Wainwright, Richard,** 12, 400.
- Waite, Morrison Remick,** 12, 401.
- Wakefield Green, Battle of,** 10, 274.
- Waldeck-Rousseau, Pierre M.**— Former Premier of France, was born in 1846. He practised as a barrister. Among other cases he was counsel for M. de Lesseps in the Panama case. In June, 1899, at the call of President Loubet he formed a ministry and in spite of the difficulty of the task he has materially strengthened his party.
- Waldersee, Count Alfred von.**— Born, 1832. A distinguished German general. Commander of the allied forces in China during the Boxer rebellion, 1900.
- Wales.**— The western portion of England north of the Severn and Bristol Channel. It was formerly independent but was subdued by Edward I. 1276-84. It was formerly incorporated with England in 1536. Area, 7,442 sq. miles. Pop., about 1,623,000.
- Wales, Prince of.**— A title borne by the heir apparent to the English throne. The first to bear the title was Edward II, 10, 263.
- Walfish Bay.**— An inlet of the Atlantic Ocean in South Africa. It was claimed by Great Britain in 1878 and was incorporated as a British possession in 1884. It has a good harbor.
- Walker, Amasa.**— (1799-1875.) An American political economist and lecturer.
- Walker, Horatio.**— American painter, 9, 331.
- Walker, John.**— (1732-1807.) An English lexicographer; best known by his "Critical Pronouncing Dictionary and Expositor of the English Language" and by his "Rhyming Dictionary."
- Walker, Robert John,** 12, 401.
- Walking chairs, Dangers of,** 2, 87.
Clubs, 6, 164.
Preyer quoted on, 2, 87.
Proper position in, 2, 412.
too early, Danger of, 2, 85.
- "Walküre, Die."**— The second part of Wagner's "Der Ring des Nibelungen." First performed in 1870.
- Wallace, Alfred Russel.**— A well-known English traveler and naturalist. He announced independently of Darwin, the theory of natural selection, his paper upon that subject being read simultaneously with that of Darwin before the Society (1858). He was born, 1822, 4, 10.
- Wallace, John F.,** 12, 179.
- Wallace, Lewis.**— Soldier and author; sketch of, 8, 327.
- Wallace, Sir William.**— (1274-1305.) A Scottish patriot and national hero. Executed on a charge of treason, 10, 263.
- Wallachia, or Walachia.**— A division of Rumania, in southeastern Europe.
- Wallack, James William.**— (1795-1864.) An Anglo-American actor and theatrical manager. Conductor of Wallack's Theater on Broadway from 1852.
- Wallack, James William.**— (1818-1873.) A

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- noted Anglo-American actor, popular in the United States.
- Wallack, Lester** (JOHN JOHNSTONE WALLACK).—(1820-1888.) A noted American actor, son of the elder James William Wallack.
- Walla-Walla**.—An important city of Washington. Pop. (1900), 10,049.
- Wallenstein, Albrecht Eusebius von**.—(1583-1634.) A celebrated Austrian general who took part in many wars and once defeated Gustavus Adolphus. He was removed from his command for suspected treachery and while attempting to go over to the Swedes he was assassinated by some of his officers, 10, 308.
- Waller, Edmund**.—(1605-1687.) An English poet.
- Wall-eyed pike**, 4, 305.
- Wall of China**, 10, 150.
- Wallon, Henri Alexandre**.—A French politician and historical writer, was born, 1812.
- Wall-paper**, Measuring, 13, 145.
Women as designers of, 7, 403.
- Walls**, Dining-room, 1, 17.
Kitchen, 1, 23.
Nursery, 1, 22.
Sleeping-room, 1, 18.
- Walnut**, 1, 37; 4, 453.
Black, 4, 453.
European, 4, 453.
White, 4, 449.
- Walpole, Horace**.—(1717-1797.) An English author; son of Sir Robert Walpole, 10, 338; 1, 87.
- Walpole, Sir Robert**.—(1676-1745.) An eminent English statesman.
- Walpurgis Night**.—Observed in Germany; the night preceding the first of May, when the witches ride forth to some appointed rendezvous.
- Walsh, Thomas F.**, 13, 447.
- Walsingham, Sir Francis**.—(1536-1590.) A noted English statesman.
- Walter, John**, 14, 87.
- Waltham**.—A city in Mass. noted for the watch-making industry. It is 9 miles from Boston and has a population (1900), of 23,481.
- Walton, Izaak**.—(1593-1683.) A noted English author, best known by his book, "The Complete Angler."
- Wamba**.—Lived in the 7th century; a king of the Visigoths in Spain.
- Wampum**, 13, 154, 165.
- Wanamaker, John**, 13, 388; 14, 77, 109.
- Wand**, Exercises with the, 6, 32.
- Wandering Jew, The**.—A well-known character in European legendary, was supposed to have been a servant of Pilate, and gave Christ a blow on his way to execution. The sentence was pronounced upon him, "Tarry thou till I come." Since then he has wandered from land to land unable to find a grave. He has been reported from many cities and countries, the last time from England, in 1830.
- Wang Wang**, 10, 151.
- Wapiti, The**.—See DEER, 2, 29.
- War and Ordnance, Board of**, 11, 133.
- Warblers**, 4, 184.
Bay-breasted, 4, 186.
Black-and-white, 4, 185.
Blackburnian, 4, 186.
Black-poll, 4, 186.
Black-throated blue, 4, 186.
green, 4, 186.
Blue-winged, 4, 186.
Canadian, 4, 186.
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Cerulean, 4, 186.
Chestnut-sided, 4, 186.
Connecticut, 4, 186.
Golden-winged, 4, 186.
Golden swamp, 4, 186.
Gray-headed, 4, 186.
Kentucky, 4, 186.
Magnolia, 4, 186.
Mourning, 4, 186.
Myrtle, 4, 186.
Nashville, 4, 186.
Orange-crowned, 4, 186.
Parula, 4, 186.
Pine, 4, 186.
Prairie, 4, 186.
Prothonotary, 4, 186.
Tennessee, 4, 186.
Wagtail, 4, 162.
Worm-eating, 4, 186.
Yellow, 4, 185.
Yellow palm, 4, 186.
- Warbling vireo**, 4, 167.
- War College, Naval**, 12, 342.
- Ward, Artemus** (Pseudonym of CHARLES FARRAR BROWNE).—(1834-1867.) A noted American humorist, 14, 213.
- Ward, Artemas**, 11, 133.
- Ward, Edward Matthew**.—(1816-1879.) An English historical painter.
- Ward, Elizabeth Stuart Phelps** (Mrs. Herbert D. Ward).—American author; sketch of, 8, 345.
- Ward, Frank E.**, 13, 76.
- Ward, Genevieve**, stage name of LUCIA GENOVEVA TERESA WARD, Countess Guerbel.—Born, 1833. A noted American actress.
- Ward, James**, 9, 281.

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Ward, Mrs. Humphry (MARY AUGUSTA ARNOLD).—Born, 1851. A noted English novelist.

Ward, John Quincy Adams.—Born, 1830. An American sculptor.

War department, 12, 396.

Warehousing, 13, 38, 298.

War-hawks, 11, 209, 260.

Warner, Charles Dudley.—(1829-1900.) An American author, 8, 233.

Warner, Seth.—(1743-1784.) An American Revolutionary general.

War of 1812, 11, 206, 209, 213.

War of Independence, 11, 66.

General expense of, 11, 98.

War of the Roses.—A struggle begun during the reign of Henry VI., between the houses of Lancaster and York. It ended in 1485, with the accession of Henry VII., who by his marriage with Elizabeth of York adjusted the conflicting interests. By this marriage Henry VIII. represented in himself both houses of York and Lancaster and further cemented the union. The badges of the two houses, the red and the white rose, respectively, gave the name to the war, 10, 273.

War of the Three Henrys, 10, 296.

The Thirty Years', 10, 308.

Warranty.—An undertaking that goods or title are as represented.

Warren, Gouverneur Kemble.—(1830-1882.) A noted American general and military engineer.

Warsaw.—The capital of Russian Poland, and the third city of the Russian empire. It is a railroad, trade, and manufacturing center. Pop., about 500,000.

Wart Hog, The, 4, 67.

Warts, Treatment of, 1, 340.

Warwick.—A city, the capital of Warwickshire, situated on the Avon. It is noted for its antique castle and beautiful church. Pop., 12,000.

Warwick, Earl of (RICHARD NEVIL, or NEVILLE).—(1428-1471.) A noted English politician and commander; killed at the battle of Barnet, 10, 274.

Washburn, Elihu Benjamin, 12, 401.

Washburn, Ichabod, 14, 45.

Washburn, William Drew, 12, 401.

Wash drawing, Instruction in, 1, 205.

Washing clothes, 1, 26.

colored cottons, 1, 29.

curtains, 1, 28.

flannels, 1, 28.

summer silks, 1, 29.

Washington.—The capital of the United States and part of the District of Columbia.

It is noted for its public buildings. Pop. (1900), 218,196.

Washington.—One of the Pacific states of the United States of America. Capital, Olympia; principal cities, Seattle and Tacoma. It has salmon fisheries, and extensive lumber and shipbuilding industries. The mineral products are coal, iron, gold, and silver. It is also a wheat state. Admitted to the Union in 1889. Pop. (1900), 518,103.

Washington, Booker T., 14, 94, 167.

Washington, Capture of.—See WAR OF 1812.

Washington, George.—First President; sketch of, 11, 134; 14, 79, 152, 262.

Birthday of, 13, 98.

Farewell Address, 11, 183.

Hamilton, and Lincoln contrasted, 11, 170.

Influence of manual training on life of, 7, 6.

Presidency of, 11, 178.

Washington, Martha, 11, 143, 14, 360.

Washington, Mount.—The highest summit of the White Mountains; height, about 6,300 feet.

Washington correspondent, 8, 482.

eagle, 4, 133.

Washington Monument.—A white marble tower erected in Washington, D. C., in honor of George Washington. The corner stone was laid in 1848, but the work was not completed until 1884. The monument is 555 feet in height.

Washita, or Ouachita, River.—Rises in Arkansas and flows southeast into the Red River in Louisiana. Length, about 500 miles, for the greater part navigable.

"Wasp," 11, 260.

Wasp, 4, 330.

Black-and-brown, 4, 331.

Mud, 4, 332.

Solitary, 4, 330.

Water, 5, 157.

an erosive agent, 5, 427.

Boiling, 5, 166.

Chemical composition of, 5, 157.

Contraction of, 5, 160.

Expansion of, 5, 160.

Freezing-point of, 5, 160.

gas, 5, 181.

Geysers, 5, 163.

Hail, 5, 162.

Hard, 5, 165.

Permanently, 5, 165.

Temporary, 5, 165.

Water, Heat of the Boiling Point.—Water cannot be heated above its boiling point, which, with the barometer at 30 in., is 212° Fahr., unless pressure be employed by pre-

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- venting the escape of the generated steam. Boiling, or the emission of steam in bubbles, consists in the formation of a vapor of equal elasticity to that of the atmosphere, which exerts its pressure on the surface of the liquid. It therefore follows that any lessening or increasing of the pressure of the air is accompanied by a corresponding depression or elevation of the boiling point. It has been ascertained that a variation of one-tenth of an inch in the barometer produces a difference of fully a twentieth of a degree Fahrenheit in the boiling point. By confining water in an air-tight vessel, it may be heated to a temperature only limited by the strength of the vessel. Liquids in general boil from 60° to 140° lower than their ordinary boiling point when heated *in vacuo*. The attraction of a fluid for the surface of the vessel in which it is boiled has an influence on the boiling point. Water boils at 212° in a metallic vessel, in a glass vessel at 214° , while in a vessel varnished inside with shellac, the heat may be raised to 220° without ebullition taking place.
- Impurities in, 5, 164.
 - in the body at birth, 2, 58.
 - of crystallization, 5, 275.
 - Playing with, 2, 128.
 - Pressure of, 5, 259.
 - Rain, 5, 161.
 - the purest, 5, 164.
 - Sea, 5, 164.
 - Seeks its own level, 5, 159.
 - Snow, 5, 162.
 - Soda-water, 5, 166.
 - Solvent power of, 5, 163.
 - Springs, 5, 163.
 - Steam, 5, 161.
 - Telling children about, 2, 145.
 - To purify, 5, 166.
 - vapor in the air, 5, 155.
 - Weight of a cubic foot of, 5, 167.
 - Wells, 5, 163.
- Waterbuck**, 4, 31.
- Waterbury**.—A city of Connecticut, near New Haven; it has important manufacturing industries, especially clocks and watches. Pop. (1900), 45,859.
- Watercolor painting**, Brushes, 1, 209.
 - Colors, 1, 208.
 - for children, 2, 422.
 - Instruction in, 1, 208.
 - Paper, 1, 209.
 - Studies suggested, 1, 210.
- "Water-dwellers,"** a game, 2, 146.
- Waterford**.—A county in the south of Ireland; and a town on the river Suir, in the same county, noted for its export trade. It is an ancient city and was a stronghold of the Danes. Pop., about 22,000.
- Water-force** in wearing away the shore, 5, 430.
- Water glass**, 5, 199.
- Water lily**, 5, 40.
- Waterloo**.—A village of Belgium, the headquarters of the Duke of Wellington at the battle of Waterloo.
- Waterloo, Battle of**.—Fought June 18, 1815, between the allied forces under the Duke of Wellington and the French under Napoleon. The former numbered 67,000, the French, 72,000. The Prussians, about 50,000 strong, under Blücher, took part at the close of the battle. The French were routed with a loss of about 35,000; the loss of the allied forces was about 22,000, 10, 351; 14, 358.
- Watermelon**, 5, 73.
- Watermint**, 5, 67.
- Water polo**, 6, 105.
- Waterproofing Cotton**, Recipe for, 6, 321.
- Water spaniel**, 4, 21.
- Water thrush**, 4, 162.
- Watertown**.—(1) A city of New York, engaged largely in manufacturing. Pop. (1900), 21,696. (2) A city of Wisconsin, a railroad and manufacturing center. Pop. (1900), 8,437.
- Watertown**.—A town in Mass., on the Charles River, 7 miles from Boston. A U. S. arsenal is situated there. Pop. (1900), 9,706.
- Waterville**.—A town in Maine, on the Kennebec River, 18 miles from Augusta. It is the seat of Colby University. Pop. (1900), 9,477.
- Watervliet Arsenal**, 11, 260.
- Watson, Henry William**.—Born, 1827. A noted English physicist.
- Watson, John** (pseudonym, IAN MACLAREN).—A Scottish author and clergyman, was born in 1850.
- Watson, Thomas E.**, 12, 182.
- Watson, William**—Contemporary English poet, 8, 368.
- Watt, James**.—(1736–1819.) A famous British inventor and civil engineer; especially noted for his improvement of the steam engine, 8, 58, 208.
 - Steam engine developed by, 5, 277.
- Watt**, a measure of electrical force, 5, 420.
- Watteau, Jean Antoine**.—French painter, 9, 264.
- Watterson, Henry**.—Born, 1840. An American journalist, 8, 226.
- Watts, George Frederick**.—Born, 1820. A noted English painter, 1, 183; 9, 410.
- Watts, Isaac**.—(1674–1748.) An English non-conformist theologian, hymn-writer, and author.

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Wat Tyler, Rebellion of, 10, 270.

Waukegan.—A town in Illinois, on Lake Michigan, 35 miles from Chicago. Pop. (1900), 9,426.

Wausau.—The capital of Marathon Co., Wis., 130 miles from Madison on the Wisconsin River. Pop. (1900), 12,354.

Waverly.—A flourishing manufacturing town of New York; it has paper mills, car wheel works, tanneries, planing mills, flour, grain, and dairy interests. Pop. (1900), 4,465.

Waxwing, The, 4, 196.

Way Bill.—List of goods given to carrier.

Wayland, Francis.—(1796–1865.) An American author, educator, and clergyman. He was president of Brown University, 1827–1855.

Wayne Anthony, 11, 150.

Weakfish.—A species of the family *Scianidae*: found along the east coast of North America.

Weakness and suggestive remedies, Faults of, 2, 243.

in children, How to overcome, 2, 245.
Physical and moral, 2, 246.

Wealth, Increase of, 13, 348.

The power and purpose of, 14, 132.

Weasel, 4, 45.

Least, 4, 45.

Weather Bureau, 12, 397.

Ground hog foretelling the, 4, 45.

Weather, Rules for Foretelling the (adopted for use with the Aneroid barometer):—

A RISING BAROMETER.—A rapid rise indicates unsettled weather.

A gradual rise indicates settled weather.

A rise with dry air and cold increasing in summer indicates wind from the northward; and if rain has fallen, better weather may be expected.

A rise with moist air and a low temperature indicates wind and rain from the northward.

A rise with southerly winds indicates fine weather.

A STEADY BAROMETER.—With dry air and seasonable temperature indicates a continuance of very fine weather.

A FALLING BAROMETER.—A rapid fall indicates stormy weather.

A rapid fall with westerly wind indicates stormy weather from the northward.

A fall with a northerly wind indicates storm, with rain and hail in summer, and snow in winter.

A fall with increased moisture in the air, and heat increasing, indicates wind and rain from the southward.

A fall with dry air and cold increasing in winter indicates snow.

A fall after very calm and warm weather indicates rain with squally weather.

The barometer rises for northerly winds, including from northwest by north to the eastward for dry, or less wet weather, for less wind, or for more than one of these changes, except on a few occasions, when rain, hail, or snow comes from the northward with strong wind.

The barometer falls for southerly wind, including from southeast by south to the westward, for wet weather, for stronger wind or for more than one of these changes, except on a few occasions, when moderate wind, with rain or snow, comes from the northward.

Weathersfield founded, 11, 46.

Weaver, General James B., 12, 287.

Weaver-bird, 4, 199.

Philippine, 4, 199.

Republican, 4, 200.

Weaving, a kindergarten occupation, 7, 37.

paper mats, 2, 417.

Webb, Alexander Stewart.—Born, 1835. A noted American general.

Webbes, John.—English painter, 9, 282.

Weber, Karl Maria von, 9, 148.

Webster, Daniel, Sketch of, 11, 398.

referred to, 14, 28, 36, 158, 225, 360.

"Reply to Hayne," 14, 352.

Webster, John.—In the early part of the 17th century; a noted English dramatist.

Webster, Noah.—(1758–1843.) A noted American author and lexicographer.

Weddings, Afternoon, 1, 46.

Anniversaries and appropriate gifts, 13, 105.

at church, 1, 46.

at night, 1, 46.

Cards of admission to church, 1, 47.

Church decorations, 1, 48.

Dress of the bride, 1, 48.

Duties of the best man, 1, 48.

bridesmaids, 1, 47.

early in the day, 1, 46.

Gifts, 1, 49.

Invitations to, 1, 47.

Preparations for, 1, 46.

Rehearsal of, 1, 48.

The ring, 1, 48.

The trousseau, 1, 49.

Wedge, 7, 211.

Principle of the, 5, 263.

Wedgewood, Josiah, English potter, 1, 220.

Wednesday, Ash, 13, 92.

Weed, Thurlow, 1, 231; 14, 200.

Weehawken.—A village in New Jersey, opposite New York City. The duel between Aaron Burr and Hamilton in 1804 occurred here. Pop. (1900), 5,325.

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- Weeks, Edwin Lord.**—Born, 1849. A distinguished American painter and illustrator, especially interested in picturing life in the Orient.
- Weeping Willow, The.**—See **WILLOW**, 4, 439.
- Weevils.**—The larvæ of the *Bruchus fabæ* and *Bruchus pisi*—the Bean and Pea weevils. They enter the seeds of the Bean and Pea and grow within them. The Bean weevil came from Rhode Island in 1861, and the Pea weevil is a native of Penn. The simplest and most effective means of getting rid of them is to soak the peas and beans intended for seed-planting in hot water just before putting them in the ground.
- "We Have Met the Enemy and They Are Ours,"** 11, 260.
- Weight, Apothecaries,** 13, 149.
 Assayer's 13, 150.
 Atomic, 5, 151.
 Avoirdupois, 13, 150.
 Diamond, 13, 149.
 of air, 5, 152.
 Child at birth, 2, 57.
 Children, Table of, 2, 94.
 Cubic foot of snow, 5, 167.
 water, 5, 167.
 Troy, 13, 194.
- Weights, Chinese,** 13, 220.
 Danish, 13, 220.
 Egyptian, 13, 220.
 Grecian, 13, 220.
 Japanese, 13, 220.
 Metric system of, 13, 152.
 Russian, 13, 220.
- Wei-hei-wei,** Leased by the English, 11, 28.
 taken by Japan, 10, 163.
- Wei-lee-wang,** 10, 150.
- Weimar.**—In Germany; the capital of the grand duchy of Saxe-Weimar-Eisenach. The literary center of Germany during the latter part of the 18th century and the early part of the 19th century. Goethe, Schiller, and other famous writers, dwelt there, under the patronage of the Grand-duke Charles Augustus.
- Weir, Harrison William.**—An English illustrator, engraver, and sketcher of animals. He was born in 1824.
- Weir, Julian Alden.**—Born, 1852. American painter, 9, 332.
- Weir, Robert Walter.**—(1803-1880.) American landscape and historical painter, 9, 331.
- Weissenburg, Battle of,** 11, 9.
- Weissman on heredity,** 2, 16.
- Welch, William E.,** 13, 441.
- Welde, Thomas,** 11, 53.
- Welland Canal.**—An important waterway, connecting Lakes Erie and Ontario, and carrying shipping around Niagara Falls.
- Weller, Sam.**—A famous character in Dickens's "Pickwick Papers"; servant of Mr. Pickwick.
- Welles, Gideon,** 12, 402.
- Wellesley, or Wesley, Arthur,** Duke of Wellington.—(1769-1852.) A celebrated British general and statesman, 11, 15; 14, 13, 86, 151.
- Wellington.**—(1) The capital of New Zealand. An important trading point. Pop., about 35,000. (2) The town of Somerset, England, from which the Duke of Wellington took his title. (3) An island belonging to Chile, off the west coast of Patagonia.
- Wellington, Arthur Mellen.**—(1847-1895.) An American civil engineer, who was connected with many American railway enterprises. He was also editor of railway and engineering periodicals, and wrote several useful books bearing upon his profession.
- Wells, Artesian,** 5, 163.
- Wells, C. H.,** 12, 152.
- Wells, David Ames.**—(1828-1898.) A noted American economist and author.
- Welsh Fairy Tales,** 3, 130.
- Wenern, or Venern, Lake.**—The largest lake of Sweden and third in size in Europe. Length, about 100 miles; width, 50 miles.
- Wentworth, "Long John,"** 14, 195.
- Wentworth, Sir John** (1737-1820.) Royal governor of New Hampshire, 1767-75. As a Royalist he went to Nova Scotia where he was lieutenant-governor of the province (1792-1808).
- Wentworth, Sir John,** 11, 65.
- Wentworth, Thomas,** Earl of Strafford.—(1593-1641.) An English statesman and chief adviser of Charles I. He was impeached by the Long Parliament for high treason and beheaded.
- Weser.**—An important river of Germany, flowing into the North Sea; length, including the head stream, 435 miles; partly navigable.
- Wesley, Charles.**—(1708-1788.) An English Methodist clergyman; famous as a writer of hymns; brother of John Wesley.
- Wesley, John.**—(1703-1791.) An English clergyman, founder of Methodism, 14, 12, 147, 188.
- West, Benjamin.**—American painter, 9, 281, 329; 14, 23.
- West Bay City.**—A city in Michigan at the mouth of the Saginaw River, opposite Bay City. Noted for its lumber trade. Pop. (1900), 13, 119.
- Westcott, Edward Noyes.**—(1847-1898.) Banker and author; best known by his book, "David Harum."

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- Westfield.**—A town in Hampden Co., Mass., noted for its manufactures. It is 10 miles from Springfield. Pop. (1900), 12,310.
- West Indies.**—A great archipelago lying between North and South America, and separating the Atlantic Ocean from the Caribbean Sea and the Gulf of Mexico. The Greater Antilles, comprising Cuba, Haiti, Porto Rico, and Jamaica; the Bahamas, and the Lesser Antilles or Caribbee Islands, are the principal groups. Cuba was freed from Spain in 1898; Porto Rico belongs to the United States; Jamaica, the Bahamas, and some of the Caribbee Islands belong to England, and Haiti is divided between two independent states. The remainder of the islands are divided between Denmark, France, and the Netherlands.
- Westmacott, Sir Richard.**—English sculptor, 9, 409.
- Westminster Abbey.**—A famous church of London. Built on the site of an earlier church and rebuilt by Henry III. and Edward I. in the 13th century. The burial place of many of England's distinguished men.
- Westminster Palace.**—(1) The houses of Parliament in London. (2) A former royal palace of Westminster, a city now incorporated with London.
- Westphalia, Peace of.**—The treaties which ended the Thirty Years' War; signed at Münster, and Osnabrück, 1648, 10, 314.
- Westphalia, Province of.**—One of the principal mining and manufacturing provinces of Prussia. Capital, Münster. Pop., about 2,500,000.
- West Point Military Academy,** 11, 323; 12, 336; 13, 369.
- West Virginia.**—One of the South Atlantic States of the United States of America. Capital, Charleston. It is one of the principal coal-producing states, and has valuable lumber interests; also mineral springs. It was formerly a part of Virginia; was admitted to the Union as a separate state in 1863. Pop. (1900), 958,800.
- Wetterin smckeless powder,** 12, 190.
- Wexford.**—A seaport and the capital of County Wexford, Ireland.
- Weyler, Don Valeriano y Nicolau,** 12, 402.
- Weyman, Stanley J.**—Born, 1855. A popular English novelist.
- Weymouth.**—A town in Mass., 12 miles from Boston, noted for the manufacture of boots and shoes. Pop. (1900), 11,324.
- Weyprecht, Lieutenant Charles,** 12, 276.
- Wharfage.**—Fees paid for use of a wharf.
- What Came of Picking Flowers,** Portuguese fairy tale, 3, 61.
- Whately, Richard.**—(1787-1863.) A noted English prelate and theologian. Author of a number of important theological, political, and economic works. Lecturer at Trinity College, Dublin, 14, 116.
- "What Hath God Wrought?"**—The words of the first message sent over the first telegraph line, from Washington to Baltimore, May 24, 1844. (See MORSE, SAMUEL FINLEY BREESE.
- What It Is to Be a Man,** 14, 29.
- What Shall I Do?** 13, 261.
- Wheat,** 5, 89.
exports, 13, 306.
Home of, 10, 181.
- Wheat-fly,** 4, 350.
- Wheatley, Henry Benjamin.**—Born, 1838. A noted English philologist and bibliographer.
- Wheatly, Francis.**—English painter, 9, 282.
- Wheaton, Henry.**—(1785-1848.) A noted American lawyer and diplomatist.
- Wheatstone, Sir Charles.**—(1802-1875.) A noted English physicist and inventor.
- Wheddon,** 11, 40.
- Wheel and Axle,** 5, 264.
- Wheeler, Benjamin Ide.**—Born, 1854. An American philologist.
- Wheeler, G. M.,** 12, 274.
- Wheeler, Joseph,** 12, 152.
- Wheeler, William Almon,** 12, 402.
- Wheeling.**—A city of West Virginia; has extensive nail manufactories and is a flourishing trade center. Pop. (1900), 38,878.
- Whewell, William.**—(1794-1866.) A celebrated English scientist and philosopher.
- Whigs,** 11, 52.
American, 11, 52.
- Whipping,** 2, 224.
- Whipple, R. J.,** 13, 410.
- Whip-poor-will,** 4, 155.
Eggs of the, 4, 120.
Habits of the, 4, 155.
Nest of the, 4, 121.
Song of the, 4, 156.
- Whisky Jack,** 4, 152.
- Whisky Ring,** 12, 403.
- Whistle wood,** 4, 424.
- Whistler, James Abbott M'Neil.**—Born at Lowell, Mass., 1834. A distinguished American artist, resident for years, in London. He was also a brilliant writer. Died, 1906.
- Whistling plover,** 4, 129.
Swan, 4, 111.
- White, Andrew Dickinson,** 12, 403.
- White, Andrew Dickinson.**—Born, 1832. An eminent American educator; author of several educational works. Minister to Russia

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- during a few months in 1892, and appointed minister to Germany in 1897.
- White, Edward Douglas.**—Born, 1845. Appointed associate justice of the Supreme Court of the United States in 1894.
- White, General Sir George Stewart, V. C., G. C. B.**—Born, 1835. Distinguished British soldier. Commander of the forces in Natal during the recent Boer War, and in charge of the British garrison besieged at Ladysmith for 118 days. He also served in the Indian Mutiny, in the Afghan War, 1878-80, and in the Nile Expedition, 1885-87. His Victoria Cross was won through distinguished bravery at Charasiab in 1879 and at Kandahar in 1880.
- White, Henry, 12, 182.**
- White, Henry Kirke, 14, 23, 95.**
- White, John Williams.**—Born, 1849. A noted American Greek scholar.
- White, Richard Grant.**—(1821-1885.) A noted American author.
- White, Stanford.**—Born, 1853. A noted American architect.
- White egret, 4, 224.**
- White-eyed vireo, 4, 167.**
- Whitefield, George, 11, 49.**
- White House.**—The residence of the President of the United States, at Washington. Corner stone laid in 1792; burned by the British in 1814. Completely restored by 1818.
- White ibis, 4, 230.**
lead, 5, 439.
maple, 4, 406.
- White Mountains.**—In New Hampshire, a group of mountains belonging to the Appalachian system. Highest peak, Mt. Washington, 6,200 feet.
- White Plains.**—A village of Westchester County, New York; the scene of an engagement between the British under Howe and the Americans under Washington, Oct. 28, 1776. The Americans were defeated.
- White River.**—A river of Arkansas and Missouri. Length, 800 miles; partly navigable.
- White River.**—A river of Indiana, formed by two forks. The larger fork flows across almost the entire state, a distance of about 300 miles. The main stream of the river after the junction of its forks, is about 50 miles.
- White Sea.**—An inlet of the Arctic Ocean extending 400 miles into northern Russia.
- White Sulphur Springs.**—A noted summer resort of Virginia.
- Whitman, Walt, or Walter.**—(1819-1892.) An American poet.
- Whitney, Mrs. (ADELINE DUTTON TRAIN.)** Born, 1824. An American novelist and miscellaneous writer.
- Whitney, Eli.**—Inventor; sketch of, 5, 290.
- Whitney, Josiah Dwight.**—(1819-1896.) An eminent American geologist.
- Whitney, Mount.**—A peak of the Sierra Nevada Mountains in California, probably the highest summit in the United States. Height, 14,897 ft.
- Whitney, William Dwight.**—(1827-1894.) A noted American philologist, brother of Josiah D. Whitney, 13, 198.
- Whittier, John Greenleaf.**—American poet; sketch of, 8, 329.
Friendship for Garrison, 12, 1.
- Whittington, Sir Richard.**—(About 1358-1423.) Lord Mayor of London.
- Whittredge, painter, 9, 331.**
- Whooping-cough, 1, 349.**
- Whooping-crane, 4, 222.**
Eggs of, 4, 114.
Nest of, 4, 114.
- Wichita.**—A city and a railroad center of Kansas. Pop. (1900), 24,671.
- Widow, Legal status of, 13, 310.**
- "Widow Bedott Papers."**—A series of humorous papers written by Mrs. Frances M. Whitcher; published about 1847.
- Wieck, Clara, 9, 134.**
- Wielizka, Salt at, 5, 187.**
- Wiesbaden.**—A city and noted health resort of Wiesbaden, Prussia; famous for its hot springs. Pop., about 70,000.
- Wife, Law of husband and, 13, 309.**
Legal duties of a, 13, 310.
- Wight, Isle of.**—In the English Channel, an island belonging to Hampshire, England; famous for its scenery.
- Wilberforce, William.**—(1759-1833.) An English orator, statesman, and philanthropist, whose name is inseparably connected with the emancipation of slavery. The bill of emancipation for which he had striven so hard was passed in 1833, one month after his death.
- Wilcox, Ella (WHEELER).**—A popular contemporary American poetess and contributor to the newspapers, 1, 231, 254; 8, 241; 14, 4.
- Wild boar, 4, 67.**
- Wild canary, 4, 168, 182.**
- Wild cat, 4, 71.**
American, 4, 71.
European, 4, 71.
Food of, 4, 71.
Home of, 4, 71.
- Wild duck, 4, 10.**
- Wild flowers, 5, 10.**
- Wild Swan, 4, 111.**

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- Wilde, Oscar Fingall O'Flahertie Wills.**— (1856-1900.) A British author.
- Wilhelmina I.** (WILHELMINA HELENA PAULINA MARIA). Queen of the Netherlands.
- Wilhelmj, August.**— Born, 1845. A noted German violinist.
- Wilkes, John.**— (1727-1797.) An English politician and political agitator.
- Wilkes-Barre.**— A city of Pennsylvania; the center of a coal-mining region, and has extensive manufacturing interests. Pop. (1900), 51,721.
- Wilkie, Sir Daniel.**— English painter, 9, 285.
- Wilkie, Sir David.**— (1785-1841.) A noted Scottish painter.
- Wilkinson, Sir John Gardner.**— (1797-1875.) A noted English Egyptologist.
- Will, Training the,** 2, 208.
Development of, 2, 213.
Object of training the, 2, 214.
Richters' advice on, 2, 215.
Spencer quoted on, 2, 215.
- Willamette River.**— In Oregon; it flows into the Columbia. Length, 250 miles, navigable in part.
- Willard, Frances Elizabeth.**— Philanthropist, 14, 335.
- William and Mary of England,** 10, 327.
Return charter to Massachusetts, 11, 47.
- William of Orange,** 8, 16; 10, 299, 327, 444.
- William II.** surnamed Rufus, from the red color of his hair, was the eldest son of William the Conqueror, whom he succeeded as King of England in 1087. His death in 1100 was caused by an arrow shot, possibly accidentally, by Sir Walter Tyrrel while hunting in the New Forest; 10, 257.
- William the Conqueror,** 10, 249.
- William the Silent,** 10, 299.
- Williams, George Henry.**— An American politician and jurist, was born, 1823. He was a member of the joint high commission which negotiated the Washington treaty in 1871.
- Williamsport.**— A city in Pennsylvania, on the west branch of the Susquehanna, 68 miles from Harrisburg. Lumber is the chief industry and the Susquehanna boom is located here. Pop. (1900), 28,757.
- Williams, Sir Monier Monier.**— (1819-1899.) A noted British Orientalist; professor of Sanskrit at Oxford, 3, 319.
- Williams, Roger,** 11, 45.
- Willimantic.**— A city of Connecticut, engaged largely in manufactures, especially of thread. Pop. (1900), 8,937.
- Willis, Nathaniel Parker.**— (1806-1867.) An American poet and author.
- Willow, The,** 4, 439.
Almond, 4, 441.
Bebb's, 4, 442.
Black, 4, 440.
Brittle, 4, 441.
Diamond, 4, 442.
French, 4, 441.
Glossy broad-leaved, 4, 441.
Hoop, 4, 440.
Huntington, 4, 442.
Long-beaked, 4, 442.
Ocher-flowered, 4, 442.
Peach-leaved, 4, 441.
Ptarmigan, 4, 126.
Shining, 4, 441.
Symbolism of, 1, 198.
Weeping, 4, 439.
Western black, 4, 441.
White, 4, 442.
- Willow herb, Great,** 5, 19.
- Wills, 13,** 124.
Dying without a will, 13, 132.
- Wills, William Gorman.**— (1828-1891.) A noted British dramatist, novelist, and painter. Author of several successful plays, among them "Man o' Airlie," "Charles I.," "Eugene Aram," and "Olivia."
- Wilmington.**— (1) A city of Delaware, an important railroad and manufacturing center, and the largest city of the state. Pop. (1900), 76,508. (2) A seaport city of North Carolina; has extensive export interests. Pop. (1900), 20,976.
- Wilmot Proviso.**— A proviso attached to a bill introduced in the United States Congress, in 1846, by David Wilmot. The object of the bill was the purchase of Mexican territory; the proviso to prohibit slavery in such territory. The bill failed to pass the senate.
- Wilson, Alexander.**— (1766-1813.) A noted Scotch-American ornithologist.
- Wilson, Mrs. (AUGUSTA J. EVANS).**— Born, 1838. An American novelist.
- Wilson, Sir Daniel.**— (1816-1896.) A Scottish-Canadian archaeologist and educator.
- Wilson, Henry,** 12, 404; 14, 95.
- Wilson, James,** 12, 404.
- Wilson, John** (pseudonym, CHRISTOPHER NORTH).— (1785-1854.) A Scottish essayist and novelist.
- Wilson, Richard.**— (1714-1782.) A distinguished English landscape painter, 9, 278.
- Wilson, William Lyne,** 12, 404.
- Wilson's Creek, Battle of,** 12, 152.
- Wilson's Snipe,** 4, 132.
- Wilson's thrush,** 4, 161.
- Wilson tariff bill,** 12, 236; 13, 119.

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- Wilton.**—A town of Wiltshire, England; noted for its manufacture of carpets.
carpet, 1, 33.
- Winchell, Alexander.**—(1824-1891.) A noted American geologist.
- Winchester.**—A city of Virginia, conspicuous during the Civil War. Pop. (1900), 5,161.
- Winchester, Battle of,** 12, 152.
- Winckelmann, Johann Joachim.**—(1717-1768.) A noted German critic, author, and archaeologist.
- Windermere, or Winandermere, Lake.**—England's largest lake; famous for the beauty of its scenery. Length, 10½ miles.
- Windischgratz,** 10, 377.
- Windlass,** 5, 264.
- Windom, William,** 12, 403.
- Window draperies,** 1, 15.
dressers, 7, 416.
seats, 1, 22.
shades, 1, 35.
- "Wind-song,"** 2, 128.
- Windsor.**—A town of Berkshire, England, the seat of Windsor Castle, a famous royal residence.
- Windsor.**—In Ontario, Canada; a port of entry and important shipping point for grain, etc. Also a manufacturing town, the principal products being carriages, leather, brooms, and tobacco. Pop. (1901), 12,153.
- Windward Islands.**—(1) A chain of the West India Islands. (2) A colony of Great Britain in the West Indies, which includes the islands of St. Vincent, Grenada, St. Lucia, and the Grenadines.
- Windward Passage.**—Between Cuba and Hayti, a channel about 60 miles in width.
- Windy City.**—A nickname given to Chicago, Ill.
- Wine, Alcohol,** 5, 230.
Fermentation, 5, 235.
Sparkling, 5, 235.
Still, 5, 235
- Winged Victory,** 9, 350.
- Wingfield, Edward Maria,** 11, 65.
- Winnebago Lake.**—In Wisconsin; length, 27 miles.
- Winnemucca Lake.**—A lake of Nevada, situated in a desert region and having no visible outlet. Length, about 27 miles.
- Winnipeg.**—(1) A river of Manitoba, flowing into Lake Winnipeg. Length, about 200 miles. (2) The capital of Manitoba, Canada. Pop., about 40,000.
- Winnipeg Lake.**—In the Dominion of Canada; length, about 250 miles.
- Winnipegosis, or Little Winnipeg, Lake.**—In the Dominion of Canada; empties into Lake Winnipeg. Length, about 150 miles.
- Winnipiseogee, or Winnepesaukee, Lake.**—In New Hampshire; length, 24 miles.
- Winooski, or Onion River.**—In Vermont; length, about 90 miles.
- Winslow, Edward,** 11, 65.
- Winslow, John Ancrum,** 12, 153.
- Winstanley,** 14, 216.
- Winter, William.**—Born, 1836. An American poet and journalist.
- Wintergreen,** 5, 15.
- Winter wren,** 4, 165.
- Winthrop, John,** 11, 45.
- Winthrop, John (Son),** 11, 46.
- Winthrop, Robert Charles,** 12, 404.
- Winton, T. H.,** 14, 208.
- Winyaw Bay.**—An inlet of the Atlantic on the coast of South Carolina. Length, about 17 miles.
- Wireless telegraphy,** 5, 322.
- Wire-pulling.**—A political phrase applied especially to secret plotting and planning in the interest of a party or a candidate.
- Wirt, William.**—(1772-1834.) An American lawyer, orator, and author.
- Wisconsin.**—One of the Northwestern States of the United States of America. Capital, Madison; chief city, Milwaukee. It is an agricultural, manufacturing, and mining state. Especially noted for its manufactures of lumber, flour, and beer. Admitted to the union, 1848. Pop., (1900), 2,069,042, 4, 58.
- Wisconsin River.**—In Wisconsin, flowing into the Mississippi; length, about 600 miles, partly navigable.
- Wise, Henry Alexander,** 12, 404.
- Wishes, The Three,** English fairy tale, 3, 121.
- Wister, Mrs. Annis Lee.**—Born, 1830. An American translator, and writer.
- Wister, Owen,** 8, 240.
- Witch in the Stone Boat,** Icelandic fairy tale, 3, 154.
- Witchcraft in Salem,** 11, 46.
- Wit, Development of,** 2, 173.
- Wither, or Wyther, or Withers, George.**—(1588-1667.) A noted English poet.
- Without recourse,** 13, 51.
- Witnesses to a signature,** 13, 122.
to a will, 13, 125.
- Witten.**—A town in Westphalia, Prussia, having extensive manufacturing interests.
- Wittenberg.**—A town of Saxony, Prussia, identified with the history of Luther and the early Reformation.
- Wives Who Have Helped Their Husbands,** 1, 238.

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Wixom, Emma (EMMA NEVADA).—Born, 1862.

A noted American soprano.

Wizard of the North, 14, 10.

Wodan.—Another name for the deity Odin.

Woffington, Margaret (PEG).—(1720-1760.)

A celebrated Irish actress.

Wohlgemuth, Michael, 9, 391.

Wolcott, Roger.—(1679-1767.) An American colonial magistrate.

Wolf, or Wolff, Christian von.—(1679-1754.)

A celebrated German philosopher and mathematician.

Wolf, The, 4, 77.

Wolfe, James.—(1727-1759.) An English general; killed at the battle of Quebec, 10, 341; 14, 177.

Wolf River.—A river of northern Wisconsin.

Length, about 200 miles. Navigable for small vessels, one hundred miles.

Wolseley, Garnet Joseph.—First Viscount Wolseley. Born, 1833. A distinguished British general, 11, 18.

Wolsey, Thomas.—(1471-1530.) A celebrated English statesman and cardinal, 10, 300, 437; 14, 95.

Woman, American Business, 7, 440.

Rise to legal equality, 13, 299.

Suffrage, 8, 237; 12, 426.

Under the law, 13, 308.

Womanhood, Responsibilities of, 2, 391.

Women in business, 7, 433.

Actresses, 7, 355.

Architects, 7, 331.

Artificial flower makers, 7, 432.

Book-cover designers, 7, 401.

Buyers for department stores, 7, 411.

Chemists, 7, 431.

China-painters, 7, 409.

Copyists for literary people, 7, 361.

Crayon portrait artists, 7, 407.

Dentists, 7, 377.

Designers of silverware, 7, 403.

textile fabrics, 7, 403.

wall-papers, 7, 403.

Florists, 7, 426.

Government employ, 7, 350.

Hair specialists, 7, 423.

Illustrators, 7, 399.

Inventors, 7, 374.

Kindergartners, 7, 367.

Laundresses, 7, 417.

Lawyers, 7, 335.

Librarians, 7, 396.

Lodging-house keepers, 7, 422.

Milliners, 7, 420.

Miniature painters, 7, 406.

Music-teachers, 7, 369.

Nurses, 7, 326.

Women in business — Continued.

Nursery governesses, 7, 365.

Occupations for, 7, 319.

Office copyists, 7, 359.

Painters and designers, 7, 404.

Photographers, 7, 388.

Physicians, 7, 321.

Piano tuners, 7, 394.

Plain and fancy sewers, 7, 418.

Private secretaries, 7, 357.

Professional shoppers, 7, 429.

Proof-readers, 7, 391.

School teachers, 7, 363.

Shop-clerks, 7, 413.

Stenographers, 7, 345.

Telegraph operators, 7, 379.

Travelling saleswomen, 7, 410.

Typesetters, 7, 392.

Window-dressers, 7, 416.

Writers of advertisements, 7, 383.

Women Who Have Influenced History, 10, 391.

Wonders of the world, 5, 422.

Wood, Ash, 7, 139.

Decorative, 1, 36.

Ebony, 7, 139.

Elm, 7, 139.

Heart-wood, 7, 137.

Lumber, Kiln-dried, 7, 137.

Mahogany, 7, 139.

Medullary rays of, 7, 138.

Oak, 7, 139.

Pine, 7, 138.

Proportionate strength of, 7, 139.

Sap-wood, 7, 137.

Shrinking of, 7, 138.

Strength of, 7, 136.

Structure of, 7, 136.

To test strength of, 7, 139.

Warping, 7, 138.

White wood, 7, 138, 140.

Wood anemone, 5, 21.

Wood-carving, 7, 215.

Design, 7, 217.

Elementary work, 7, 222.

Positions of the hands, 7, 218.

Primary instruction, in, 7, 218.

Tools required, 7, 215.

Use of the tool, 7, 218.

Wood for carving, 7, 216.

Woodchuck, 4, 44.

Woodcock, 4, 128.

Wood duck, 4, 110.

"**Wooden Spoon**," 14, 12.

Wood ibis, 4, 230.

Wood, Leonard, 12, 405.

Woodpecker, 4, 176.

American three-toed, 4, 179.

Arctic three-toed, 4, 179.

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- Californian, 4, 178.
- Golden-winged, 4, 178.
- Hairy, 4, 179.
- Ivory-billed, 4, 179.
- Little downy, 4, 177.

Wood peewee, 4, 199.

Wood-pulp for paper, 5, 239.

Woods, Durability of.—Experiments have been lately made of driving sticks, made from different woods, each two feet long and one and one-half inches square, into the ground, only one-half an inch projecting outward. It was found that in five years all those made of oak, elm, ash, fir, soft mahogany and nearly every variety of pine were totally rotten. Larch, hard pine, and a teak wood were decayed on the outside only; while acacia, with the exception of being also slightly attacked on the exterior, was otherwise sound. Hard mahogany and cedar of Lebanon were in tolerably good condition; but only Virginia cedar was found as good as when put in the ground. This is of some importance to builders, showing what woods should be avoided, and what others should be used by preference in underground work.

The duration of wood when kept dry is very great, as beams still exist which are known to be nearly 1,100 years old. Piles driven by the Romans prior to the Christian Era have been examined of late, and found to be perfectly sound after an immersion of nearly 2,000 years.

The wood of some tools will last longer than the metals, as in spades, hoes, and plows. In other tools the wood is first gone, as in wagons, wheelbarrows, and machines. Such wood should be painted or oiled; the paint not only looks well but preserves the wood; petroleum oil is as good as any other.

Hardwood stumps decay in five or six years; spruce stumps decay in the same time; hemlock stumps in eight or nine years; cedar, eight to nine years; pine stumps, never.

Cedar, oak, yellow pine, and chestnut are the most durable woods in dry places.

Timber intended for posts is rendered almost proof against rot by thorough seasoning, charring and immersion in hot coal tar.

Wood-sorrel, 5, 78.

Woodstock.—A small town in Oxfordshire, England; formerly a royal residence.

Wood stork, 4, 230.

Woodward, Henry.—Born, 1832. A British geologist. In 1880 appointed keeper of the geological department of the British Museum.

Wood Work, 7, 128.

- Bench, 7, 129.
- Bench tools, List of, 7, 130.
- Beveling, 7, 169.
- Bit, 7, 173.
- Brace, 7, 173.
- Brad-awl, 7, 173.
- Box, How to make a, 7, 152.
 - Cover, 7, 186.
 - Finishing the, 7, 184.
 - Nailing the, 7, 160.
 - Varnishing the, 7, 188.
- Chalkline, 7, 208.
- Chamfering, 7, 169.
- Chisel, 7, 166.
- Door, Making, a, 7, 189.
- Dowels, 7, 211.
- Drawing, A working, 7, 154.
- Gimlet, 7, 173.
- Glue, 7, 182.
- Gluepot, 7, 182.
- Grindstone, 7, 202.
- Hammer, 7, 157.
- Hewing, 7, 137.
- Hinges, 7, 186.
- Miter-box, 7, 164.
- Mortising, 7, 171, 173.
- Nails, 7, 157, 210.
- Planes, 7, 146.
- Plans, Working, 7, 152.
- Sandpaper, 7, 185.
- Saws, 7, 140.

Woody Crest.—A home for crippled children, established near New York, by Helen Miller Gould.

Woo-How, 10, 152.

Wool, Average yield per sheep, 4, 24.

Grades of, 4, 24.

Merino, 4, 24.

Sheep shearing, 4, 24.

Where grades are located on sheep, 4, 24.

Woolner, Thomas, 9, 410.

Woolsey, Theodore Dwight.—(1801–1889.) An American educator and noted politician and legal writer.

Woolson, Constance Fenimore.—(1848–1894.) An American novelist; grand-niece of James Fenimore Cooper.

Woonsocket.—A city of Rhode Island largely engaged in the manufacture of woolen and cotton goods. Pop. (1900), 28,204.

Wooster, David, 11, 150.

Woo-tsung, 10, 153, 157.

Woo-Wang, 10, 148.

Worcester.—(1) A city of Massachusetts; an important manufacturing place. Pop. (1900), 118,421. (2) The capital of Worcestershire,

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- England. A manufacturing center, and has important hop trade. Pop., about 45,000.
- Worcester, Joseph Emerson.**—(1784-1865.) An American lexicographer.
- Worden, John Lorimer.**—(1818-1897.) An American admiral, who first won distinction as commander of the "Monitor," 1862.
- Words and phrases of foreign languages,** 13, 317. Choice of, 8, 429.
- Wordsworth, William.**—(1770-1850.) A celebrated English poet, 14, 38.
- Working drawings,** 7, 288.
- Work, Measures of,** 5, 420.
- World's Columbian Exposition.**—Opened May, 1893, and continued for six months; its object the celebration of the four hundredth anniversary of the discovery of America by Columbus. For its establishment and conduct the United States government appropriated \$6,000,000; the receipts exceeded the expenditures by \$2,000,000.
- Worm-eating Warbler,** 4, 186.
- Worms,** 4, 375.
Earthworm, 4, 375.
Hairworm, 4, 377.
Leech, 4, 376.
Sea mouse, 4, 377.
Sea worms, 4, 377.
Serpula, 4, 378.
Terebella, 4, 378.
- Worms.**—A city in the grand duchy of Hesse, Germany; one of the chief German cities of the Middle Ages.
- Worms, Diet of.**—The imperial diet before which Martin Luther was summoned; opened Jan. 28, 1521, by Emperor Charles V. at Worms.
- Wort,** in fermentation, 5, 236.
- Wotton, William.**—(1666-1726.) A noted English clergyman and scholar.
- Wounds, First aid in,** 1, 357.
- Wouverman, or Wouvermans, Philip.**—(1619-1668.) A distinguished Dutch painter.
- Wreckage.**—Merchandise saved from a wreck.
- Wren, Sir Christopher.**—(1632-1723.) A celebrated English architect, 14, 20, 226.
- Wren, The,** 4, 164.
- "Wrestlers," The.**—Famous Greek statue, in the Uffizi Gallery, Florence.
- Wrestling,** 6, 141.
- Wright, Horatio Gouverneur,** 12, 405.
- Wright, Joseph.**—(1734-1797.) A distinguished English painter.
- Wright, Thomas.**—(1810-1877.) An English antiquary and historian.
- Writers' Cramp, or Scriveners' Palsy,** 13, 168.
- Württemberg.**—A kingdom of southern Germany. Capital, Stuttgart. It is an agricultural country and also very extensively engaged in manufacturing.
- Würzburg.**—The capital of Lower Franconia, Bavaria; a flourishing manufacturing, railroad, and commercial center. Pop., about 65,000.
- Wu Ting,** 10, 36.
- Wyandotte Cave.**—A noted cave in southern Indiana; length, 22 miles.
- Wyant, Alexander H.**—(1836-1892.) A noted American landscape painter, 9, 331.
- Wycliffe, John,** 8, 367.
Life of, 10, 271.
- Wye.**—A river of England and Wales, noted for its scenery. Length, about 130 miles.
- Wyndham, Charles.**—Born, 1841. A noted English actor.
- Wynne, Robert J.,** 12, 181.
- Wyoming.**—One of the United States, surrounded by Montana, South Dakota, Nebraska, Colorado, Utah, and Idaho. The surface is mountainous as the state is crossed by the Rocky Mts. Stock-raising, coal and silver mining are the chief pursuits. It was organized as a territory in 1868, and was admitted into the Union in 1890. It has one representative to Congress and two senators. Cheyenne is the capital. Area, 97,890 sq. miles. Pop. (1900), 92,531.

X

- Xanthippe.**—The wife of the Greek philosopher, Socrates.
- Xavier, Francisco, Saint.**—(1506-1552.) A famous Spanish Jesuit missionary.
- "Xebec."**—An armed vessel formerly used by the Algerine corsairs. It was capable of great speed.
- Xenia.**—A city of Ohio. An educational center. Pop. (1900), 8,696.
- Xenophanes.**—(About 570-480 B. C.) A Greek philosopher.
- Xenophon.**—(About 439-357 B. C.) A celebrated Greek historian; disciple of Socrates.
- Xerxes I.**—(About 519-465 B. C.)—King of Persia; son of Darius Hystaspes, 10, 188, 195.
- Xerxes II.**—King of Persia for a short period, 425 or 424 B. C.
- Ximenes, Francis de Cisneros.**—(1436-1517.)

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A noted Spanish statesman, archbishop, and cardinal, 10, 280.

Xingu.—One of the most important tributaries of the Amazon River of South America. It flows through a part of Brazil and has a course of over 900 miles.

X Rays, 5, 321.

Xyloidine.—An explosive formed by dissolving starch in nitric acid, and precipitating with water.

X. Y. Z. Mission, 11, 260.

Y

Yak.—A species of ox; a native of Tibet, where it is domesticated. The wild yak is the largest animal of Tibet and is found only in the coldest parts of the country; it is extremely fierce.

Yakima.—A river in the state of Washington, flowing into the Columbia. Length, about 200 miles.

Yale, Elihu, 11, 65.

Yale's blind law student, 8, 66.

Yalu, Battle of, 10, 163.

Japanese, 10, 175.

Yam, 5, 76.

Yama, 10, 32.

Yamagata, Aritomo, Marquis.—Born, 1838. A prominent Japanese statesman; created marquis for his distinguished services in the war with China, 1894.

Yamaska.—A river of Quebec flowing into Lake St. Peter, an enlargement of the St. Lawrence. Length, about 100 miles.

Yana.—A large river of Siberia; length, about 1,000 miles.

Yang Keen, 10, 151.

Yang-te, 10, 152.

Yang-tse-Kiang.—The largest river of the Chinese empire. It rises in northern Tibet and empties into the Yellow Sea. Length, about 3,200 miles.

"Yankee Doodle," 11, 65.

Yankees, 11, 65.

Yankton.—A city of South Dakota; the former capital of the territory of Dakota. Pop. (1900), 4,125.

Yard, how divided, 13, 147.

Yarmouth, or Great Yarmouth.—A seaport of England, on the North Sea; noted for its fisheries. Pop., about 50,000.

Yaroslafl.—The capital of the government of Yaroslafl in Russia; engaged largely in manufacturing, cotton and linen especially. Pop., about 80,000.

Yarrow.—A small river of Scotland.

Yarrow, or Milfoil, 5, 78.

Yates, Edmund Hodgson.—(1831-1894.) An English journalist and novelist.

Yazoo River.—A river of Mississippi, flowing into the Mississippi River. Length, 280 miles.

Year, Chinese, 13, 93.

Fiscal, 13, 97.

French Revolution, 13, 97.

Mohammedan, 13, 102.

of Brahma, A, 10, 7.

Roman, 13, 90.

Russian, 13, 91.

Yeast, 1, 120.

and Bread-making, 5, 241.

Yellow avens, 5, 24.

Yellow-billed cuckoo, 4, 180.

Yellow bird, 4, 182.

Yellow-breasted Chat, 4, 186.

Yellow Hammer, 4, 178.

Yellow Palm Warbler, 4, 186.

Yellow-throated Vireo, 4, 167.

Yellow-throat, Maryland, 4, 185.

Yellow Warbler, 4, 185.

"Yellowplush Papers," The.—A series of sketches by Thackeray, published, 1841.

Yellow Sea, or Hwang-hai.—An inlet of the Pacific Ocean, between China and Corea. Width, about 400 miles.

Yellowstone Lake.—In the Yellowstone National Park. Length, 20 miles.

Yellowstone National Park.—A region lying principally in Idaho, Wyoming, and Montana, set aside by Congress as public grounds. It is noted for its magnificent scenery and wonderful natural features: geysers, hot springs, etc. Area, about 5,500 sq. miles.

Yellowstone River.—A river rising in Wyoming, and flowing through Montana, into the Missouri in North Dakota. Length, about 1,300 miles; partly navigable.

Yenisei.—A river that rises in Mongolia, and flows through Siberia to the Arctic Ocean. Length, over 3,000 miles; partly navigable.

Yermak, Cossach Chief, 11, 25.

Ygdrasil, 10, 121; 2, 184.

Ying-tsung, 10, 157.

Ymer, 10, 118.

Yokohama.—A seaport of Japan. A steam-

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- ship terminus and has important foreign trade. Pop., about 150,000.
- Yom Kippur**, 13, 102.
- Yonge, Charlotte Mary**.—Born, 1823. An English novelist, and miscellaneous writer.
- Yonkers**.—A city of New York, on the Hudson River, engaged largely in manufacturing. Pop. (1900), 47,931.
- Yonne**.—A river in France, flowing into the Seine. Length, 171 miles; partly navigable.
- Yonne**.—A department of France; capital, Auxerre. Has agricultural interests and manufactures wines.
- York**.—A city and county; capital of Yorkshire, England. It contains one of England's finest cathedrals.
- York**.—A city of Pennsylvania, engaged largely in manufacturing. The seat of the Continental Congress, 1777-78. Pop. (1900), 33,708.
- York, Duke of**, 11, 47.
House of, 10, 273.
- Yorkshire**.—The largest county of England. It has important agricultural, mining, and manufacturing interests. Area, about 6,000 sq. miles; pop., about 3,500,000.
- Yorkshire terrier**, 4, 21.
- Yorktown**, 11, 150.
- Yosemite Falls**.—Three falls of Yosemite Creek, in the Yosemite Valley. The largest is 1,500 feet in height.
- Yosemite Valley**.—In California, in the Sierra Nevada Mountains, a region famous for its magnificent scenery.
- Young, Brigham**.—(1801-1877.) A Mormon leader; president of the Mormon Church, 12, 405.
- Young, Edward**.—(1681-1765.) An English poet.
- Young, Thomas**.—(1773-1829.) Distinguished English physicist and mathematician.
- Youngstown**.—A city of Ohio, engaged largely in iron manufactures. Pop. (1900), 44,885.
- Ypsilanti**.—A city of Michigan; seat of the State Normal School. Pop. (1900), 7,378.
- Ysaye, Eugène**.—Born, 1858. A noted Belgian violinist.
- Yucatan**.—(1) A peninsula of Mexico, extending into the Gulf of Mexico and Caribbean Sea; famous for its ruins. (2) A state of Mexico, situated in the peninsula of Yucatan. Capital, Merida. Pop., about 300,000, 11, 40.
- Yucatan, Channel of**.—A channel connecting the Gulf of Mexico and Caribbean Sea, and separating Cuba and Yucatan. Width, 125 miles.
- Yuen-tsung**, 10, 153.
- Yukon**, in its lower course called the **Kwich-pak**.—A river that rises in British America and empties into Bering Sea. Length, about 2,000 miles; navigable, 1,200 miles.
- Yung-Ching**, 10, 160.
- Yung-lo**, 10, 158.
- Yunnan**.—A province of China. Area, 150,000 sq. miles; pop., about 12,000,000.
- Yvon, Adolphe**.—(1817-1893.) A French painter.

Z

- Zachariah**.—King of Israel. Son of Jeroboam II.
- Zacharias**.—Pope 741-752. Commemorated on March 15.
- Zalaka, Battle of**, 10, 244.
- Zama, Battle of**, 10, 216.
- Zambesi**.—An important river of Africa, flowing into the Indian Ocean. Length, about 1,500 miles.
- Zanesville**.—A city of Ohio, engaged largely in manufacturing. Pop. (1900), 23,538.
- Zanzibar**.—(1) A fertile island off the east coast of Africa; noted for its cloves. Area, 625 sq. miles. (2) Capital of the sultanate of Zanzibar, situated on the island of Zanzibar; an important trading and seaport town. Pop., about 30,000.
- Zarathushtra**, 3, 360.
- Zealand**.—(1) The largest island of Denmark; it contains the capital, Copenhagen. Length, 80 miles. (2) A province of the Netherlands. Capital, Middelburg.
- Zebra, The**, 4, 91.
Burchell's, 4, 92.
- Zebu, Indian Ox, or Brahmin Ox**.—Regarded by naturalists in general as a variety of the common ox. Its most distinctive feature is a fatty hump on the back, above the shoulders.
- Zedlitz, General**, 14, 124.
- Zeiten, Captain**, 14, 129.
- Zenith**, 5, 109.
- Zeno**.—In the 5th century, B. C. A Greek philosopher.

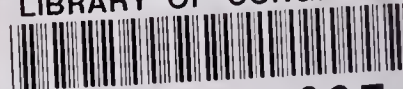
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- Zeno.**—Lived in the 3d century, B. C. A Greek philosopher, founder of the school of Stoics.
- Zenobia.**—Wife of Odenathus, ruler of Palmyra; queen of Palmyra, **10**, 231, 400.
- Zeus.**—See STORY OF THE ILIAD, **10**, 184.
- Zerubbabel**, **10**, 184.
- Zeugtodon**, **5**, 466.
- Zeuta, Battle of**, **10**, 328
- Zilhidje**, **13**, 103.
- Zinc**, **5**, 210.
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- Zion, Mount.**—The elevation upon which a part of the old city of Jerusalem stood. Height above sea-level, 2,537 feet.
- Zittau.**—A city of Saxony. A manufacturing center and especially noted for its manufactures of linen and damask. Pop., about 26,000.
- Zodiac, The**, **5**, 114.
Chaldean, **10**, 55.
Signs of the, **5**, 114.
- Zola, Emile.**—Born, 1840, of French and Italian parentage. A noted novelist, **14**, 170.
- Zöllner, Johann Karl Friedrich.**—(1834–1882.) A noted German physicist and astronomer.
- Zollverein**, German Customs Union, **11**, 5.
- Zoology**, **4**, 9.
Divisions of, **4**, 9.
- Zoroaster**, **3**, 360.
- Zuleich, Potiphar's Wife**, **3**, 252.
- Zulu, or Amazulu.**—A Bantu nation of British South Africa.
- Zululand.**—A British protectorate in South Africa. Pop., about 175,000.
- Zumbusch, Caspar**, **9**, 404.
- Zurich.**—The capital of the canton of Zurich in Switzerland, and the leading city of Switzerland. It has important trade and manufacturing interests and is also a literary center. Pop., about 120,000.
- Zurich, Peace of.**—A treaty of peace between Austria on one side and France and Sardinia on the other, Nov. 10, 1859, **11**, 4.
- Zutphen, Battle of**, **10**, 299.
Kindness of Sidney at, **2**, 474.
- Zuyder Zee, or Zuider Zee.**—An inlet of the North Sea penetrating the coast of the Netherlands. Length, about 80 miles.
- Zwickau.**—(1) A district of the kingdom of Saxony. (2) A city of the kingdom of Saxony; an important railroad and commercial center; also a manufacturing place, and the center of a rich coal region.
- Zwinger.**—A famous museum at Dresden. In its picture gallery are many of the works of the old masters, including Raphael's "Sistine Madonna."
- Zygomatic fossa**, **1**, 273.





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